Lectures
ON
TUMOURS OF THE BREAST.

Delivered at the Royal College of Surgeons of England on June 6th, 1894,

BY RAYMOND JOHNSON, M.B., B.S. LOND., F.R.C.S. ENG.,

HUNTERIAN PROFESSOR; ASSISTANT SURGEON TO UNIVERSITY COLLEGE HOSPITAL AND THE VICTORIA HOSPITAL FOR CHILDREN.

LECTURE II.

MR. PRESIDENT AND GENTLEMEN,—The last variety of the adenomatous group of tumours of the breast depends for its distinctive features upon a modification of the glandular elements in it. These become transformed into large cysts occupied by coarsely divided intra-cystic growths which project from their wall. Such a tumour is represented in Fig. 1, and although of unusual size, shows well the naked-eye characters. It was removed by Mr. Quain from a woman aged fifty-nine. The tumour weighed 7 lb. 3 oz., and had existed for four years; it was encapsuled, not adherent to the skin or deep structures, and there was no

FIG. 1.

Cysto-adenoma.

glandular enlargement. The solid parts of the growth resemble a fibro-adenoma, whilst the largest cyst measures more than three inches in diameter, and "the intra-cystic growth presents an appearance resembling the head of a cauliflower." The microscopic examination of the solid parts of these tumours reveals their adenomatous characters, whilst the cystic formations can be readily explained by a great exaggeration of the closely packed foliaceous masses which we have already considered in the fibro-adenomata. The development of the large cysts in the tumour explains the rapid increase in size which often occurs and its very lobulated outline. The clinical history often points clearly to the beginning of these growths in a tumour having all the characters of a fibro-adenoma. They may be most conveniently called "cysto-adenomata." In the later stages of their growth these tumours may present features which would at first sight seem to separate them once and for all from the class adenoma. They grow rapidly and often reach a large size, presenting at times a most malignant appearance. The projecting cysts are often covered with thin, reddened skin, which is traversed by much distended veins. Later, the skin and the subjacent cyst wall give way and the papillomatous intra-cystic growth sprouts from the opening and rapidly increases, with an appearance of considerable malignancy. Those, therefore, who found their classification on clinical evidence only may well at first sight object to a nomenclature which includes under one heading a small, slowly growing fibro-adenoma as large as a hazel nut, and a tumour weighing several pounds with rapidly growing, cauliflower-like masses of growth bursting through the skin. And yet the cysto-adenoma has just claims to its place amongst the simple adenomata. It is perfectly encapsuled; it displaces mechanically but does not replace the breast tissue; it does not recur after removal and does not occasion secondary growths in the lymphatic glands or in the viscera. The stroma of the cysto-adenoma is usually soft, and resembles in microscopic structure that of the soft fibro-adenoma. For reasons similar to those which have suggested the use of the name adeno-sarcoma for the latter tumour many writers speak of the cysto-adenoma as a "cysto-sarcoma" or "adeno-cysto-sarcoma." The same objections can be raised in both cases, and the additional one in the latter instance that much confusion is apt to arise between the names cysto-sarcoma and cystic sarcoma, which refer to two essentially different tumours.

Some reference must here be made to the "sero-cystic tumour" of Sir Benjamin Brodie. In his "Lectures on Pathology and Surgery," 1846, Brodie gives a careful description of the disease, which sufficiently shows that it is in fact cystic degeneration of the mamma, with the formation of cysts containing intra-cystic growths—the so-called "proliferous cysts." The objection to the use of the name "sero-cystic tumour" for such a disease is that it seems very undesirable to apply the term "tumour" to cystic changes in the breast tissue. "Sero-cystic tumour" still forms a heading in many museum catalogues, and is made to include such essentially different conditions as fibro-adenoma, cysto-adenoma, cystic degeneration, and duct papilloma. For these reasons there seems no advantage in the use of the name, although the description given by Brodie of the disease to which he himself applied it remains classical.

We are now, I hope, in a position to arrange the members of the class Adenoma as follows:—

1. *Pure adenoma.*—A rare form represented by an encapsuled tumour, composed of glandular tissue more or less closely resembling that of the normal breast, with a scanty stroma of connective tissue.

2. *Hard fibro-adenoma.*—A slowly growing encapsuled tumour of frequent occurrence, composed of variously modified glandular tissue, lying in an abundant fibrous stroma.

3. *Soft fibro-adenoma.*—A more or less rapidly growing encapsuled tumour, composed of variously modified glandular tissue, lying in an abundant more or less completely cellular stroma.

4. *Cysto adenoma.*—A rapidly growing encapsuled tumour, characterised by the transformation of the glandular tissue into large cystic spaces, occupied by papillomatous intra-cystic growths.

Certain considerations concerning this group of tumours in general must now shortly engage our attention; and in the first place the question arises, What is the mode of origin of the adenomata? Putting aside such views as those which have supposed that these tumours may take origin in an effusion of blood, milk or pus, three chief opinions are held on this subject: (1) that they arise by a modification of a lobule of the breast; (2) that they take origin in small outlying detached lobules of the gland; and (3) that they commence as a growth into one of the ducts. With regard to the first view I hope that enough has been already said to show that a study of their clinical history, minute structure, and their relation to the breast proper is altogether opposed to the belief that the adenomata arise as a modification of any portion of the gland tissue proper. The outlying lobule theory is supported by the fact that a large proportion of these tumours are situated at the periphery of the breast or upon one of its surfaces, and by the proof afforded by careful dissection that such small peripheral outlying lobules do exist. The loose attachment of the tumour to the adjacent surface or edge of the breast is in favour of the view; and further, the study of adenomata in other regions, especially of the parotid gland, gives some support to their origin in isolated fragments of gland tissue, which have failed to become connected up with the proper glandular apparatus. It is conceivable that such an isolated lobule, stimulated by the same force which brings the gland into functional activity, may take on a pathological growth. Such an explanation, whatever truth it may contain, will only apply to a certain number of the tumours in question. If we consider the

position in the breast of those adenomata which are not superficial or peripheral we shall, I think, find that they are usually situated centrally, near the nipple. This fact is suggestive that they may have a duct origin. We have the high authority of Sir James Paget in favour of the view that a solid adenoma may have its origin in a cyst by the formation of an intra-cystic growth, which gradually increases in size until it completely fills the lumen. The wall of the cyst becomes the capsule of the tumour. (Two photographs were shown of cysts found in the same breast, one partially occupied by a vegetating growth, the other completely filled by a glandular growth attached to the wall of the cyst by a slender pedicle.) Such a glandular growth occupying the dilated portion of one of the large ducts may thus assume the characters of a solid fibro-adenoma, and may be justly called a "duct adenoma." (A photograph of this variety of fibro-adenoma was exhibited.) The specimen from which the photograph was taken consists of a cyst in the centre of the breast, attached to the wall of which is a solid rounded growth as large as a walnut. The structure of this growth is that of a simple glandular tumour; spaces lined with a short cubical epithelium lie in an abundant fibro-cellular stroma. The surface of the tumour was partially covered with a single layer of cubical epithelium cells.

There is a specimen in the museum of this College which seems to be an example of a solid fibro-adenomatous tumour growing in a duct. The case is thus described by Sir Everard Home in his "Observations on Cancer" (London, 1805). "A woman came into St. George's Hospital who had a small tumour at the basis of the nipple which was very movable; often blood came by the ducts, which was the first symptom of the disease, and she discovered the tumour some time afterwards. It was removed with a good deal of the surrounding breast and other parts. The tumour was found upon examination to be perfectly circumscribed and appeared to be a new substance, not at all a part of the breast itself."

There seems to be sufficient reason for dividing the fibro-adenomata into (1) those which are superficial or peripheral, and probably arise in isolated fragments of gland tissue; and (2) those which lie in the substance of the mamma, and are probably of duct origin. Without venturing to speak too positively, I am inclined to believe that the former variety is that occurring in early life, and is usually the hard form, whilst the latter, or duct tumour, occurs especially in later years, and tends to be of the softer variety and is more prone to become cystic. I find that Gross, in speaking of the "sarcomata," under which heading he includes the soft fibro-adenomata, states that those tumours occurring near the nipple are usually cystic, whilst those occurring peripherally are usually solid. The same writer also makes the interesting assertion that discharge from the nipple occurs in 1 in 7 cases of cystic fibromata (cysto-adenomata), but not in the solid fibromata (fibro-adenomata). Discharge from the nipple is indeed a rare symptom of the adenomatous tumours generally, and when present strongly suggests that the growth is of duct origin. A case which well illustrated these points was in University College Hospital in 1885. The patient was aged fifty-one years and had first noticed the tumour three years previously. The growth was cystic and encapsuled, and occupied the centre of the breast. An opening in the skin outside the nipple communicated with one of the cysts in the tumour, whilst pressure on another of the cysts caused a yellow discharge to escape from the nipple. The glandular spaces in the growth were lined with columnar epithelium—an additional proof of its duct origin. I have already referred to the fact that in the removal of an adenoma situated in the substance of the breast the tumour is usually easily separable from its capsule except at one spot, where division of tissue is required; the relation is exactly that of an intra-cystic growth to the wall of the cyst. The surrounding capsule and breast tissue are so rarely removed with a fibro-adenoma that it is not often possible to examine the exact nature of the capsule. If the latter be at times the wall of a cyst, it might be expected to show some remains at least of the epithelium which originally lined it. I have twice stained the inner surface of the capsule of a fibro-adenoma with nitrate of silver, but have failed to demonstrate an epithelial lining.

The *Duct Papilloma* may conveniently be considered here, as its relationship to the duct adenoma is in some respects a close one. The description of a typical case will serve to indicate the chief features of this tumour. A woman forty years of age was admitted into University College Hospital under the care of the late Mr. Berkeley Hill on account of a lump in the right breast of two months' duration. For eighteen months there had been a milky discharge from the nipple. A rounded tumour could be felt in the substance of the breast, one inch above and external to the nipple. Pressure upon the tumour caused the discharge from the nipple to become blood-stained. The breast was excised and the tumour is represented in Fig. 2. It consists of a very delicate, almost feathery papilloma, five-eighths of an inch in diameter, occupying a smooth-walled cyst formed by distension of a breast duct. The tumour is attached to the wall of the cyst by a slender pedicle. Microscopically such a growth consists of delicate vascular papillary processes covered with cubical or columnar epithelium, whilst the more solid portions may contain closed spaces lined with a similar epithelium. The similarity of the tumour to a papilloma of the rectum is absolute, and it is interesting to note that the occurrence of hæmorrhage from the nipple is no more evidence that the tumour which bleeds is malignant than is hæmorrhage from the rectum in the case of a tumour of the bowel. The anatomical differences between the duct adenoma and the duct papilloma are not very great, and it has been suggested that the latter may become transformed into the former by a gradual process of consolidation and connective tissue over-growth. More interesting is the relation between the simple duct papilloma and the duct carcinoma—a columnar-celled carcinoma commencing in

FIG. 2.

Duct papilloma.

the epithelium of the larger ducts. This tumour has received thorough investigation in this country by Bowlby, Robinson, and others. The essential difference between the two tumours is clear—the duct papilloma is altogether confined to the interior of the distended duct, whilst the duct carcinoma defies this boundary and infiltrates the surrounding tissues. Like the corresponding tumours of the rectum, one is pedunculated and the other infiltrating. (A photograph was shown illustrating the presence of a duct papilloma and a duct carcinoma in the same breast.) Clinically the differential diagnosis of the two tumours may in the early stages be difficult if not impossible. An isolated tumour in the substance of the breast near the nipple, associated with a blood-stained discharge from the nipple, is probably a duct papilloma or a duct carcinoma. In such a case it may be well to excise the affected lobule, and, if examination prove the growth to be infiltrating, to remove the remains of the gland. Excision of the whole breast will also usually be required if a simple papilloma has reached a considerable size and is situated centrally.

Complete absence of malignancy is, I believe, characteristic of all varieties of the class Adenoma. It is generally agreed that this is true of the slowly growing fibro-adenoma, the only likely source of error being that after the removal of such a growth a smaller one in the immediate vicinity which escaped notice at the operation may continue to grow. Mr. Bryant mentions that on two occasions at least, when

removing a fibro-adenoma from the breast, he has found a second encapsuled growth about as large as a pea close to the larger one. The soft fibro-adenoma (the "adeno-sarcoma" of writers), and the cysto-adenoma ("cysto-sarcoma") are, I believe, also perfectly innocent, and I have failed to find any convincing proof that true recurrence of these growths ever occurs, or that secondary deposits are ever met with. The statistics given by many writers are misleading, because these tumours are included among the sarcomata, and thus we find the frequency of recurrence and secondary deposits discussed. The complete absence of malignancy of even the softest and most rapidly growing fibro-adenomata is, to my mind, the most practical objection to any classification which includes them in the same class as the sarcomata, and for the same reason the name adeno-sarcoma is objectionable. As one probable explanation of certain supposed instances of recurrent fibro-adenoma, it must be remembered that one variety of cancer of the breast—the acinous carcinoma—presents microscopically some resemblance to a simple glandular tumour. I shall have occasion to refer to this variety of cancer in the next lecture, but may here remark that the distinction should at once be easy if the relation of the growth to the tissues around it be carefully observed.

Much confusion has arisen from the application of the name cysto-sarcoma (the cysto-adenoma) to a disease of the breast which is altogether different. I refer to cystic degeneration of the gland, with the formation of cystic spaces often filled with intra-cystic growths. This disease forms a well-defined variety of the cystic affections of the mamma, and has been fully described by French writers, of whom I may especially mention Reclus. It occurs during the stage of functional activity, and must be clearly distinguished from the cystic changes which often accompany the process of involution. The larger cysts are recognised as hard "tumours" in the substance of the breast, whilst the smaller ones give a peculiar coarsely granular sensation on palpation. The larger cysts often contain papillomatous growths (Fig. 3), and should the disease—

FIG 3.

Cystic disease of breast.

as, indeed, is not uncommon in the early stages—be limited to one lobule, it certainly bears a superficial resemblance to a cysto-adenoma. The removal of such a lobule is very likely followed after a variable interval by similar changes in the remaining part of the breast, a condition which has been wrongly spoken of as "recurrent cysto-sarcoma or cystic adenoma." An example of this will be found recorded by me in the forty-third volume of the Transactions of the Pathological Society. A woman aged thirty-three was admitted into University College Hospital under Mr. Marshall in 1877. The left breast was excised; in its upper part was a cyst as large as an orange, which contained a polypoid mass as large as the thumb. There were several smaller cysts scattered throughout the breast, with many of which small firm nodules of growth were connected. The cysts were lined with cubical epithelium. Four and a half years later (in 1882) the patient was readmitted to the hospital. The right breast, which had become cystic, was excised. In 1889 the patient was again admitted, under Mr. Beck. Above the middle of the scar in the left mammary region was a rounded movable swelling an inch in diameter, which had been slowly forming for two years. It was smooth and elastic, and unattached to the skin. The growth was excised, together with a broad margin of surrounding fat. It consisted of two cysts—one as large as a small chestnut, the other as large as a pea—each filled by a soft papillomatous growth (Fig. 4). The tissue around

FIG. 4.

Recurrent cystic disease of breast.

the cysts revealed under the microscope breast tissue in process of cyst formation. The case was evidently one of cystic degeneration of both breasts and presented the very interesting feature that recurrence of the disease took place in a fragment of the left breast which had escaped removal when the gland was excised ten years previously. The two diseases—cystic degeneration of the breast and cysto-adenoma—must, in the light of our present knowledge, be regarded as entirely distinct affections. They resemble each other only in so far as each presents, as a marked feature, cystic spaces and intra-cystic growths. With this exception they have nothing in common. On the one hand we are concerned with an encapsuled tumour containing cysts as part of its structure. On the other hand, we find a widespread change in the original breast tissue, the glandular spaces of which become transformed into cysts—the breast is profoundly altered, but no tumour is present. The distinction is not merely of pathological interest, but of supreme clinical importance. The surgeon who removes a cysto-adenoma may quite justly give a favourable prognosis, whereas the outlook in a case of cystic degeneration is much less hopeful, for, as we have seen, the probability that other parts of the same breast, or even the opposite one, will sooner or later become affected is considerable. In the later stages of cystic disease of the breast the resemblance to a cysto-adenoma may be further increased by the fact that the skin overlying a superficial cyst may gradually yield to pressure, and after the skin and cyst wall have given way the intra-cystic growth may fungate through the opening.

The consideration of 75 cases consecutively treated at University College Hospital, and regarded as different varieties of adenomatous tumours, illustrates several points of interest. Of these cases, 9 were probably not actual tumours: thus 7 cases which are described as "cystic adenoma" and "cystic fibroma," were apparently examples of cystic degeneration of the breast; 2 cases of chronic mastitis are described as "diffuse fibroma" and "adenoma" respectively; whilst the nature of a case described as "cystic sarcoma," and destroyed with caustics, is altogether doubtful. Of the remaining 65 cases, which appear to be true adenomatous growths, the tumour was single in 59, and double in 5; whilst in 1 case three separate tumours were present. Nine cases in which "recurrence" is described require satisfactory explanation. In 3 of these the recurrence was nothing more than the continued growth of a second tumour. In 2 cases described as "recurrent cystic adenoma," one of which I have already alluded to in some detail, the disease was cystic degeneration, and the recurrence was due to changes in the remaining breast tissue. A case described as "recurrent adeno-sarcoma" was probably recurrent sarcoma; no

microscopic examination is recorded, and the growth, which was a third recurrence, invaded the pectoral muscle. In the remaining 3 cases the description of the tumours is very suggestive that the disease was carcinomatous, although the evidence of this is incomplete; in 2 of these 3 cases there was disease of the axillary lymphatic glands.

And here we are met by a question of much clinical and pathological importance—Do the tumours of the class adenoma exhibit any tendency to become carcinomatous? An adenoma consists of simple glandular elements and simple connective tissue elements in varying proportion. It is conceivable that such a tumour may become malignant, either by carcinomatous changes in the one constituent tissue, or by sarcomatous changes in the other. Sir James Paget's remark has, I believe, lost none of its truth as the result of later observations, "I am not aware of any facts which prove what is commonly believed, that adenomata of the breast may become cancerous." The nomenclature adopted by some writers on the subject would certainly lead us to infer that the adenomata and carcinomata are closely allied. Thus cancer is spoken of as "malignant adenoma," in contrast with the "simple adenoma"; whilst adenoma is called by others "typical epithelioma," and cancer "atypical epithelioma." The evidence afforded by the consideration of tumours in other parts of the body is to my mind not in favour of the view that the transformation of a simple into a malignant growth is at all common. The favourite example which is brought forward in evidence on this point is the development of a squamous-celled carcinoma of the skin or mucous membrane from a wart or papilloma. In many such instances, however, the growth which precedes the development of the cancer has no very just claims to be called a simple tumour. The "wart" is the result of an overgrowth of the epithelial and other tissues of the part, often the result of some definite chronic irritation. Indeed it appears that the development of carcinoma from a warty growth is often rather an example of the development of a malignant growth in a part affected by chronic inflammation than of the transformation of a simple tumour into a malignant one. With our present means of observation the passage from the one condition to the other is in this case quite a gradual one, and in no way analogous to the development of an infiltrating cancer from a simple encapsuled adenoma. The only sure pathological proof of such a transformation would be an encapsuled adenoma which at some point in its periphery had burst through its capsule and commenced to infiltrate the surrounding tissues. Of this condition I can find no recorded instance. Certain obvious difficulties in the way of believing such a change to be common at once present themselves. The clinical history of cases of cancer of the breast is usually opposed to the view that the growth began in a pre-existing simple tumour, and, as far as I am aware, the evidence is equally negative in those cases in which the cancer occurs early, at the age when the adenomata are common. Again, a cancer first presents itself as a limited induration in the substance of the breast, whereas the adenomata are in the large majority of cases peripheral and but loosely connected with the breast itself. Specimens are brought forward from time to time illustrating the presence of a cancer and one or more fibro-adenomata in the same breast. It would, indeed, be surprising if such a combination did not occasionally occur, but the fact is in itself no evidence that the cancer in question had its origin in an adenoma. Mr. Jonathan Hutchinson, jun., has recorded a case in the Transactions of the Pathological Society—and the specimen is preserved in the museum of this College—in which an adenoma is surrounded by a carcinomatous growth. The patient, a woman aged forty-four, had been aware of a lump in the breast as large as a cherry since girlhood. A growth formed around the adenoma, and the affected part of the breast was excised. It seems very doubtful in this case, however, as Mr. Hutchinson remarks, whether the scirrhus had anything more than an accidental connexion with the adenoma. Mr. Bryant refers to this case, and records another in which "between the cancerous tumour and the nipple, and upon the surface of the gland, there was a second tumour, the size of a nut, which was encapsuled, and on section presented a coarse, lobulated surface, and to the eyes and microscope yielded the appearance of an adeno-fibroma."

It has been stated that a fibro-adenoma of the breast may disappear spontaneously, and marriage has been thought to be a possible determining cause of such an occurrence. It is almost impossible to prove or disprove such a statement, but the question must always arise whether the supposed adenoma, which has spontaneously disappeared, may not have been a small cyst or a localised induration of the gland tissue. At all events, the chances of such a result must be so remote and improbable that they cannot influence the surgeon in his treatment of the adenomatous tumours. The removal of the growth, although small, should be strongly advised, on the ground that, after possibly remaining stationary for years, it is at any time liable to take on more rapid growth and assume serious proportions.

Passing now to the consideration of the infiltrating, and therefore malignant, tumours of the breast, we find the task of classification far easier than in the case of the simple encapsuled tumours. Two great classes, indeed, alone concern us—Sarcoma and Carcinoma. A sarcoma of the breast may be defined as an infiltrating or imperfectly encapsuled tumour, composed of embryonic connective tissue or some modification of it. Glandular tissue does not enter into its composition, or, rather, takes no essential part in its structure, but if present only represents remains of the glandular elements of the breast involved by the infiltration of the growth. By this definition all those tumours into the essential structure of which glandular tissue enters are excluded, and I hope that enough has been already said to justify upon clinical and pathological grounds the inclusion of the so-called "adeno-sarcoma" amongst the adenomata and not amongst the sarcomata. Another important group of diseases must also be excluded—viz., the various forms of cystic degeneration of the mamma with the formation of intra-cystic growths. This has been sometimes called "sero-cystic sarcoma," a useless and misleading name, founded apparently upon the single fact that the intra-cystic growths met with in this disease are often largely composed of highly cellular connective tissue. By this process of exclusion the "vast and complex group of new growths," of which Mr. Stephen Paget speaks in a recent lecture, is reduced to very small and simple proportions. Sarcoma of the breast is rare. Of 396 cases of tumour of the breast consecutively treated in University College Hospital, 317 were carcinomatous, 14 sarcomatous, and 65 adenomatous. The rarity of the pure sarcoma is consistent with the comparative rarity of the simple encapsuled tumours consisting of connective tissue only. From a purely pathological standpoint the sarcomata of the breast need not long detain us, for they behave in every respect in accordance with the characteristics of the sarcomata generally. Thus they infiltrate the surrounding tissues to an extent not appreciable to the sight and touch, and thus frequently recur after removal. Generalisation through the blood-stream is not infrequent with the formation of secondary growths in the lungs and other internal organs, whilst in a certain number of cases the axillary lymphatic glands are the seat of disease. The spindle-celled variety of sarcoma seems to be the most common, but the round-celled, mixed-celled, alveolar, and even giant-celled varieties may be met with. Myxo-sarcoma also needs mention, whilst chondro-sarcoma and osteo-chondro-sarcoma have been recorded. It is of importance that here, as elsewhere, a sarcoma may be so extremely destroyed by hæmorrhage into its substance, as to appear little more than a blood cyst, whilst the "cystic variety" of sarcoma may be met with as the result of hæmorrhage into, or degenerative softening of, a previously solid growth.

Although the sarcoma is an infiltrating tumour and intimately connected with the surrounding breast tissue it is certainly true that in some cases the growth is surrounded by a more or less perfect capsule of fibrous tissue. In its relation to the surrounding tissues it indeed stands midway between the perfectly encapsuled adenomatous tumours on the one hand, and the carcinomata on the other hand. This is a point of considerable practical importance, for it cannot be too strongly insisted that the diagnosis of the nature of a tumour of the breast depends largely upon the relation of the tumour to the surrounding tissues. It thus results that a sarcoma of the breast may in some instances be mistaken for a soft fibro-adenoma, and in others for a soft carcinoma. The resemblance to a soft fibro-adenoma may be further increased by its lobulated outline, whilst if the sarcoma be cystic the clinical features may be much like those of a cysto-adenoma. At the risk of repetition I would here mention that by the use of the name "cysto-adenoma" in place of "cysto-sarcoma," for that variety of adenoma in which the tumour is characterised by the conversion of the glandular tissue into large cysts, we avoid the almost necessary confusion between this growth and the "cystic sarcoma" with which it is in no way related. Brief reference may here

be made to two cases of sarcoma of the breast illustrating the resemblance of the tumour to a carcinoma and an adenoma respectively. Both cases were under the care of Mr. Marcus Beck.

CASE 1. *Sarcoma of breast simulating cancer.*—A widow fifty-three years of age, whose sister had died of "cancer of the breast," was admitted into University College Hospital on account of a small lump in the left breast, which she had accidentally noticed two or three weeks previously. A rounded tumour, one and a half inches in diameter, caused a slight elevation of the skin internal to the nipple. The surface of the growth was slightly nodular, the margins rounded and well defined, and the consistence moderately firm. The overlying skin was slightly œdematous, but not adherent to the growth. The nipple was not retracted, but on drawing it from the tumour loose bands could be felt passing between them. The presence of a slightly enlarged gland in the axilla was doubtful. The whole breast was excised. The tumour was pinkish-white in colour, and very soft, especially in the centre. The superficial part of the tumour was surrounded by a dense fibrous capsule, but the deep surface was intimately connected with the breast tissue. The growth consisted of round, oval, and spindle cells, lying in a finely granular, ground substance. No gland tissue was present.

CASE 2. *Sarcoma of breast simulating cysto-adenoma.*—A married woman fifty-three years of age accidentally noticed a small lump in the right breast seven or eight years before her admission into University College Hospital. The tumour increased slowly and then rapidly until the breast was occupied by a rounded and well-defined tumour measuring ten inches over its surface. The tumour was firm except at the most prominent part, where a sense of fluctuation was obtained over an area three inches in diameter, and here also the skin was thinned and bluish-red in colour. The tumour had no deep attachments; the nipple was flattened out on the outer part of the swelling. No enlargement of the axillary glands could be detected. The whole breast was excised. The peripheral parts of the tumour were very soft and pink in colour, but nowhere cystic; the central part was firmer, more fibrous, and at one spot calcareous. The growth consisted of small, round, angular and spindle cells lying in an abundant finely fibrillated matrix. No gland tissue was present. About two years after the excision of the primary tumour a large mass of recurrent growth was removed from the mammary region.

The rarity of alveolar sarcoma of the breast is perhaps sufficient excuse for briefly relating a case in which the tumour was mistaken for a cancer until the character of the secondary deposits led to a further examination of the microscopic appearances of the primary growth.

CASE 3. *Alveolar sarcoma of breast.*—A married woman fifty-five years of age had been aware of a lump in the left breast for about five months. At the time of her admission into University College Hospital the tumour had the size and shape of a hen's egg; it was intimately connected with the breast tissue, but had no adhesions to the skin or deep structures. The nipple was normal. A gland as large as an almond could be felt in the axilla. The breast and the axillary glands were removed by Mr. Beck. The tumour was firm; its cut surface was flat and intersected by fine bands of fibrous tissue, and numerous minute cysts were divided by the section. The lymphatic glands were infiltrated with similar growth. The patient remained well for fifteen months and then began to experience pain in the right thigh. She died, much emaciated, two years after the operation. Secondary deposits were found beneath the periosteum of the skull bones, in the frontal lobe of the brain, in both lungs, both kidneys, the liver, the sternum, the right femur, and the right humerus. The growth in the sternum infiltrated the bone from the second to the fourth costal cartilage. Of the two deposits in the femur, the larger had extensively destroyed the compact tissue and infiltrated the medulla. The growth in the humerus was subperiosteal. No recurrence had taken place in the mammary region or axilla. The appearance of the secondary growths was so suggestive of sarcoma that a careful examination of the primary tumour was again made, and it was definitely decided that it was an alveolar sarcoma and not a carcinoma.

In speaking of fibroma of the breast I have already alluded to the probability that such a tumour may occasionally have a duct origin, and have shown a photograph of a tumour apparently of this nature. In this case a large lobulated fibrous tumour lay in the substance of the breast near the nipple. The capsule which enclosed it was presumably the wall of the greatly distended duct in which the tumour had grown. I know of only one specimen which suggests that a lobulated sarcomatous growth may have a similar origin. The specimen is preserved in the museum of St. Bartholomew's Hospital (No. 3155), and consists of a portion of a deeply lobed vascular mass 7lb. in weight, which microscopically is a mixed-, round-, and spindle-celled sarcoma. The tumour was of thirteen years' growth, and occurred in a woman thirty-seven years of age. The skin over the growth became livid, and after incision a quantity of coffee-coloured fluid was discharged. Subsequently the growth in question fungated through the opening and grew rapidly. The history of the case and the resemblance of the tumour to the fibroma already described suggest that it perhaps deserves to be called a "duct sarcoma."

An Address
ON
THE RELATION OF SLIGHT DEGREES OF ALBUMINURIA TO LIFE ASSURANCE.

Delivered before the Life Assurance Medical Officers' Association on May 30th, 1894,

BY G. V. POORE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND CONSULTING PHYSICIAN TO THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN, ETC.

GENTLEMEN,—When your secretary did me the honour to suggest that I should open a discussion upon some subject of interest to the members of this society, I at once selected one which seemed to me to be of great importance and much in need of discussion. It is a subject which is not only of interest to medical officers, but is one, I fancy, upon which the minds of managers and actuaries are apt to dwell; and I think I should not be wrong in stating that there are many managers who are under the impression that there is a growing tendency among medical officers to keep away business on the ground of albuminuria—a ground which does not always seem to them to be adequate. Although I feel greatly the honour of being allowed to address you, I must crave your indulgence and ask you to discriminate between a paper which is voluntarily offered and one which is furnished, on rather short notice, in response to a request. Your secretary's request has been made at a period of the year when my time is very much occupied in a variety of ways and I have been quite unable to find leisure to look up the literature of the subject and to make myself acquainted with the opinions of all the authorities who have written upon it. You must excuse my shortcomings in this respect, and I must take comfort to myself in the thought that in the discussion which is to follow other members will make good my deficiencies. This paper has been written, not with the idea that I shall teach any of our members very much, but most certainly in the expectation that I shall learn a great deal from others, and I hope I am not wrong in regarding our association as a coöperative society in which the experience of each is for the benefit of all.

Let me first define what I mean by albuminuria. I would define it as the formation of a precipitate in an acid urine when it is boiled, and which remains persistent after the addition of a few drops of additional acid. This is the commonest test for albumen, one which has stood the test of time, one with which we are all intimately acquainted, and one concerning which we may fairly claim to have an adequate knowledge of the clinical import. As far as our knowledge goes the test I have mentioned is more free from sources of fallacy than any other, and reacts with albumen and albumen only.

Of late years several other tests for albumen have received attention, and, although they are very delicate and very convenient, they precipitate peptones, albumoses, and alkaloidal bodies in addition to albumen, and I would humbly submit that our knowledge of the clinical import of these bodies in the urine is, as yet, too imperfect to enable us to base upon their presence a definite line of action in relation to the insurability or otherwise of the lives of persons whose urine gives

evidence of their presence. If a medical examiner hastily rejects or loads the life of a person whose urine becomes cloudy on the addition of potassio-mercuric-iodide or picric acid, it may well happen that he may keep away "good business" from the office. If a cloud appears when these tests are used it should always be a rule to confirm the presence of albumen by the older and commoner test before making any recommendation as to the acceptance or otherwise of the life. It is necessary to say this because students and young men fresh from the schools are often rather prone to put their trust in the last new thing, and to discard the older and better understood processes, and it may well be that candidates have been reported as suffering from albuminuria when, in fact, they have been suffering from nothing of the kind.

When we are confronted with slight albuminuria we have to determine whether or no the life is insurable. The discovery of slight and unsuspected albuminuria should, I think, make us look carefully at the candidate a second time, to be sure that we have not overlooked some of the usual concomitants of such a condition. A trifling hypertrophy of the heart, slight pallor, deficient body weight, slight increase in the tension of the pulse, ever so slight a puffiness round the ankles, a tongue slightly furred or slightly tremulous, a florid complexion or any other evidence of intemperance, or any slight evidence of an old and perhaps forgotten syphilis, at once assume an importance when joined with slight albuminuria which otherwise they would not possess.

Then, again, we probably all know the candidate who impresses us unfavourably without our being able to say very definitely why. Examiners for life assurance become like practised horse dealers. We cast an eye over the candidate and we get an instant impression from his physique and demeanour that he is likely to turn out, on examination, to be either "sound" or otherwise. It is never satisfactory to recommend the *rejection* of a life without being able to put upon paper such reasons for the rejection as may seem adequate to the lay members of the "board." We must have examined not a few unsatisfactory and unwholesome-looking subjects that impress us as "bad lives," and yet it has been impossible to find adequate reasons for rejection. In a few of such cases slight albuminuria has solved my doubts, and I have recommended rejection on the grounds of slight albuminuria and general appearance. Sometimes a candidate is unable to furnish a sample of urine at the time of examination; and if the examination has otherwise proved in all respects satisfactory we give him the benefit of the doubt and accept the life without examining the urine. In the case of candidates whose general appearance gives an adverse or doubtful impression, I always postpone my recommendation until the urine has been examined. The discovery of slight albuminuria is thus of great importance, because it necessarily tinges all the facts of the case, including the family history, and gives an importance to trifles which otherwise we might feel inclined to neglect.

If, on finding a trace of albumen in the urine, a second examination of the candidate fails to reveal any other adverse fact, what is to be done? Clearly the case *must* be postponed for a second or a third examination of the urine, and I think it is important that the second examination should not be too soon after the first. An interval of at least a week, or better still a fortnight, should be allowed in order to give ample time for the subsidence of any temporary disturbance which may have caused the albuminuria. This second or third examination of urine tells us whether or no the albuminuria is *temporary* or *permanent*.

If the albuminuria is *slight* and *temporary*, and if the candidate is otherwise sound, looks strong and hearty, with no suspicion of intemperance and with no flaws in the family history, I should feel inclined to recommend him as an average risk, but, of course, I should rate him up for trifles which, under other circumstances, I might feel inclined to neglect.

If the albuminuria is *slight* and *permanent*, what is to be done? This is a question which can hardly be answered categorically. Some lives (perhaps the majority) will undoubtedly have to be rejected, and I think we shall all agree that, if accepted, an extra premium will have to be charged.

We have all of us certainly had experience of patients who have lived for many years with albumen constantly in the urine. I have in my mind the case of a lady aged seventy-six whose urine has certainly been albuminous for twenty years. Dr. Francis Hawkins has communicated to the Clinical Society two remarkable cases in which life had been prolonged to extreme age in spite of persistent albuminuria of very many years' duration, and doubtless the members of this society will be able to tell of many more such cases. On the other hand, Dr. Munn of New York, who is quoted by Dr. Hilton Fagge, has reported on sixty-nine lives rejected in the space of four years by a New York office on account of albuminuria. Within the four years he tells us that four of the cases had died and that the others were evidently deteriorating. Such an observation as this, apart from details, is not of much service, and I believe the question of the rejection or loading of cases of slight permanent albuminuria is one which must be left to the individual judgment of the examiner. The eligibility or otherwise of a candidate for life assurance depends on a variety of circumstances, and, while on the one hand none of these can be neglected, I think it would be unwise to allow any one fact to outweigh all the others and act, as it were, automatically as an absolute bar.

We shall all of us probably agree that a candidate whose urine repeatedly shows the presence of a distinct amount of albumen is to be accepted, if at all, only with a considerable amount of loading.

Since it has become the custom to examine the urine of patients as a matter of routine we have come to a knowledge of the fact not only that albuminuria is much more common than was previously suspected, but that albumen may be temporarily present in the urine of those who afford no reliable evidence of kidney disease, as the result of various causes such as cold bathing, excessive exercise, injudicious diet, sexual excess, &c. Whether or no the increased frequency with which albuminuria is reported is entirely due to the routine searching for it is doubtful. That it is mainly due to that cause there can be no doubt. If we could be sure that it was entirely due to that cause our business colleagues might say with some justice: "We made good profits in the days before the institution of such a routine. We are content with the profits we have made, and we object to have business kept away by such routine." The calculations of actuaries are made, it must be remembered, on "average lives," and if everybody who passed the door of the office came in and effected an insurance no medical examination would be necessary.

In these days of competition insurance offices form no exception to the rule, and it is quite natural and quite proper that managers of offices should jealously watch any action on the part of their medical officers and medical advisers which may appear to them to have the effect of keeping away "good business." A man who presents himself for insurance is a "bird in the hand," and if he be outwardly sound and healthy-looking our business colleagues naturally feel disappointed if such a life be rejected, and scarcely less disappointed if it be "postponed" (with the risk that he may go to a competing office) because the urine shows a cloud of albumen when it is acidified and boiled.

Some offices are inviting bad lives by doing away with their medical watch dogs, and are holding out the inducement of "no medical examination." This is a very hazardous policy, for it is idle to shut our eyes to the fact that minor degrees of fraud are not uncommon among candidates for insurance. False statements, doubtless, are not infrequently made from ignorance or carelessness, but equally undoubtedly they are often made intentionally. When a man insures for the sake of making provision for his wife and children he is tolerably sure to think twice before he makes any untrue statement which may invalidate the policy; but the man who is insuring for the protection of a money-lender is less likely to be so scrupulous, even if we set aside the fact that these persons often belong to a class which, to put it mildly, is little troubled by scruples. Those who are driven to their wits' ends to raise money do not hesitate to become mildly fraudulent, and it is well to remember an old proverb, to the effect that "it is difficult for an empty purse to stand upright."

It must by no means be forgotten that the increasing frequency of albuminuria among candidates for life assurance may be due to causes of far more serious import than the mere fact of the establishment of a routine among the examiners of lives. We must not forget the fact that the expectation of life in males after twenty years of age was, according to Dr. Ogle, less in the decade 1871–80 than in the period 1838–54, which was used for Dr. Farr's life table. The great majority of those who insure their lives are males over twenty, and the fact that the expectation of life in this

particular section of the public is tending to decrease is one which insurance offices cannot afford to neglect. This fact is brought out very forcibly in the annual reports of the Registrar-General, who gives the death-rates at twelve age-periods for five successive decades between 1841 and 1890. It will answer my purpose and make the matter less complicated if I give the results for the first and last decades only. It will be seen that the decrease of the death-rate in males, which has been so remarkable during the last half century, is most marked in the first three decades, after which there is a considerable increase up to the age of seventy-five:—

ENGLAND.

Death-rates at Twelve Age-periods.—Males.

—	0–	5–	10–	15–	20–	25–
1841-50	71·2	9·2	5·1	7·1	9·5	9·9
1881-90	58·7	5·3	3·0	4·4	5·8	7·9

—	35–	45–	55–	65–	75–	85–
1841-50	12·9	18·2	31·8	67·5	148·3	312·3
1881-90	12·5	19·7	34·0	71·3	146·5	305·8

It is not unimportant to notice that this increase in the death-rate of males in the prime of life is far more marked in urban than in rural places, for I suppose one may take it for granted that the urban population furnishes more candidates for insurance than the rural population. Let us take the age-period of forty-five to fifty-five and see how the death-rate for this period varied in different localities for the year 1890 (the returns for which I happen to have by me). The death-rate of males between forty-five and fifty-five in the whole of England was in 1890, 19·2; in London, 22·8; in Lancashire, 27·1; in the West Riding of Yorkshire, 22·9; in Wiltshire, 14·1; in Dorsetshire, 12·0; in Huntingdon, 9·4. These are facts which cannot be neglected, because they show an increasing mortality among the class from which candidates for life assurance are largely drawn.

Again, let me point out that the death-rate from diseases of the urinary system is tending steadily to increase. The annual death-rates per 1,000,000 persons living from diseases of the urinary system for the six quinquennial periods intervening between 1861 and 1890 were as follows: 246·2, 286·8, 326·4, 374·8, 422·2, 446·6. Since 1858 the death-rate from urinary diseases has doubled. A part of this increase in the Registrar-General's returns of the death-rate from urinary diseases may be accounted for by increased knowledge and change in nomenclature, but I take it that it is not all due to these causes, and we should be very wrong to neglect so startling a fact. Clearly, then, "albuminuria" is a matter which demands very careful consideration by examiners for life assurance and also by managers and actuaries.

Seeing that we have always to be on our guard against mild forms of fraud, it is necessary to be quite sure that the urine we examine is the urine of the candidate for insurance. The urine must always be passed in the presence of the medical officer, and I may as well state that I am practically certain that on two occasions an attempt has been made to deceive me. One person, I believe, brought a small quantity of urine in a test-tube which he surreptitiously tilted into the urine vessel (he was a chemist), while another handed me a sample of urine which was cold and thick, and which I have no doubt he brought in a six-ounce bottle concealed in his pocket. Both were rejected and it was ascertained that the latter had been previously rejected by another office for albuminuria.

The urine of women is far more difficult to form an opinion upon than the urine of men, because there is a periodic cause which may give us slight albuminuria, not to mention so frequent a trouble as leucorrhœa. Again, it is not possible to remain in the room while a lady is furnishing a sample of urine, and thus the fraud of urinary personation, if I may call it so, is more easy for a woman than a man.

It is to be regretted that we have no means of getting the after-histories of persons rejected for albuminuria. This seems to me to be necessary before we can come to any very decided opinion on the subject. I am, however, unable to suggest any method by which such after-histories can be obtained.

ON THE LARYNGEAL MOTOR ANOMALIES: ABDUCTOR TONUS AND ABDUCTOR PROCLIVITY.

BY JAMES CAGNEY, M.A., M.D. R.U.I., M.R.C.P. LOND.,
IN CHARGE OF ELECTRO-THERAPEUTICS, ST. MARY'S HOSPITAL; PHYSICIAN TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS; ASSISTANT PHYSICIAN TO THE NORTH-WEST LONDON HOSPITAL.

THE purpose of this paper is to show that the seeming anomalies in the action of the laryngeal abductor muscles may be explained upon well-recognised principles, and that Semon's law may be a modified instance of an older, larger, and more general law. It will be useful to preface the remarks which are to be made upon this head with a short account of the growth of our knowledge concerning the facts with which we have to deal. It starts with the introduction of the laryngoscope. Much that before had been speculative was then confirmed and ascertained, idle theories were disposed of, and facts took the place of assertions. Above all, the number of observers was multiplied. The perfection of the new means of observation attracted new workers. A new science may be said to have resulted, and to have been born under the happiest auspices, an enthusiasm to observe and record, a rare and reluctant recourse to the old system of too hasty generalisation. The practical possibilities of the new resource were speedily made apparent. Already, in 1860, Traube[1] had diagnosed two cases of aortic aneurysm from the laryngoscopic appearances indicating paralysis of the left vocal cord. The abundant literature of which this communication was the prelude contains the records of very many cases of paralysis from pressure on the recurrent laryngeal nerve. The assumption was easy and obvious that paralysis from such a cause would affect indifferently, and, on the whole, with the same frequency, each of the muscles supplied by fibres from the nerve that was compressed. Gerhardt,[2] writing in 1863, declared that in paralyses of the vagus and recurrent laryngeal nerves certain fibres of the injured nerve might be affected separately or in a preponderant degree. Further experience and research were destined to expand this statement and to give to it a very unexpected significance. A new and important development began with the study of a group of symptoms—noisy inspiration, and inspiratory dyspnœa, with unimpaired voice and unimpeded expiration—a condition which was spoken of as "bilateral paralysis of the abductors of the vocal cords," and with the appearance in 1876 of Riegel's classical work upon "Respiratory Paralyses." This paper is a masterly analysis of the facts already accumulated by Gerhardt,[3] Türck,[4] Morell Mackenzie and Hughlings Jackson,[5] but as yet there was no hint of the remarkable fact that a lesion apparently implicating the whole trunk of the recurrent laryngeal nerve could under any circumstances affect only the corresponding abductor. O. Rosenbach[6] published in 1880 the notes of a case in which pressure by a cancer of the œsophagus on both recurrent laryngeal nerves had caused bilateral paralysis first of the abductors and subsequently of all the muscles supplied by the injured nerves, and he expressly pointed out that, in such cases—namely, of paralysis from pressure on the recurrent laryngeal nerve—the function of the abductors may alone suffer in the first instance. It has been contended that this statement was not justified by the evidence at Rosenbach's disposal. With this question and the subsequent controversy[7] we are not concerned. Rosenbach's proposition was undoubtedly correct, but it was only a partial statement of the truth. The remainder was established by the simultaneous and independent researches of Semon.[8] In a number of cases which he examined he found that with a lesion of the nerve, whether central or peripheral, and of an extent and severity, as it seemed, sufficient to affect in an equal degree the function of all its component parts, the abductors were paralysed either alone or previously to and in a greater degree than the adductors. He then instituted a diligent search into the records of cases

[1] Gräfe's Deutsche Klinik, 1860, No. 11; 1861, No. 27.
[2] Virchow's Archiv, Band xxvii., pp. 68 and 246.
[3] Loc. cit.
[4] Klinik der Krankheiten des Kehlkopfs, 1866.
[5] Medical Times and Gazette, 1866, p. 638.
[6] Breslauer Aerztliche Wochenschrift, 1880, Nos. 2 and 3.
[7] Berliner Klinische Wochenschrift, 1884, Nos. 17 and 22; 1888, Nos. 8 and 10.
[8] American Archives of Laryngology, vol. ii., No. 3.

reported by other observers and found that in none were the adductors affected in like manner preferably to the abductors. It is admitted that the number of instances observed was sufficient to have produced an exception to this remarkable fact if any existed. Von Ziemssen[9] in 1876, repeating Gerhardt's statement that in central or peripheral lesions of the laryngeal motor nerves certain fibres might happen to be alone or preponderantly implicated, still declared that it was a matter of accident as to which nerves or muscles should so suffer. Rosenbach had hazarded the statement that in cases of pressure on the recurrent laryngeal nerve it was the abductors which during life displayed the earliest and most decided symptoms of paralysis. It was now incontestably proved that the preferential incidence of, the proclivity to paralysis followed an invariable rule, that it singled out the abductors in all cases, and that it mattered not in what part of the neuro-muscular tract the lesion was placed—whether in the medullary centre, the vagus, or the recurrent laryngeal nerve. A fact so remarkable, and in a sense at variance not only with expectation but with all conceptions founded upon analogy, demanded an explanation, and several were speedily forthcoming. Morell Mackenzie[10] conjectured that perhaps the abductor filaments were more superficially situated than the adductor, or that the latter were possibly reinforced by the superior laryngeal nerve. Bosworth[11] suggested that abductor paralysis was always of central origin. The first of these hypotheses fails as an explanation where the lesion is central, and the second involves an assumption which is disproved. Gowers[12] ascribes the relative immunity of the lateral crico-arytenoid to a supposed mechanical advantage in its action. The theory of Cohen-Tervaert[13] relies upon Exner's views as to the part taken by the superior laryngeal in the innervation of the larynx, and is very well answered by Semon,[14] as are others propounded by S. Solis-Cohen, Jelenffy, Tissier, and Wagner. The explanation which has attracted most notice, and which is still sustained by its author, is that of Krause.[15] It is known as the "contracture hypothesis." Krause inferred from certain experiments upon animals and from other considerations that the condition in question was a phenomenon of excitation, that it was not a primary paralysis of the posterior crico-arytenoids followed by contracture of the antagonists, but that it was a primary paralytic contracture of all the muscles supplied by the recurrent nerve, in which the contracture of the adductors preponderated. The principal amongst many opponents of this view is Semon. While it is admitted that even in man very acute lesions of the recurrent laryngeal nerve may have an irritative influence, it is contended that the ordinarily progressive organic affection cannot bear this interpretation—that the pressure exercised upon a nerve in other parts of the body by a slowly growing tumour causes not contracture, but paralysis, that in cases of multiple central (bulbar) lesions the resulting phenomena are, with this exception (if it is an exception), paralytic, and, finally, that contracture cannot account for the marked and invariable degeneration of the posterior crico-arytenoid muscle and of the nerves supplying it in the cases now under discussion. This degeneration, indeed, is one of the most remarkable facts in connexion with abductor paralysis, and presents an insuperable objection to most of the hypotheses now under discussion. It is abundantly proved that central and peripheral lesions which cause a preferential paralysis of the abductors produce also a degeneration of the fibres of the posterior crico-arytenoid, and that this muscle and its nerve are not merely more subject to paralysis from organic injuries than are the adductors, but that they have a decidedly smaller power of resistance. Functional paralysis, on the other hand, or that for which no organic cause can be assigned, and which is not attended with consequent degeneration, is known only to fall upon the adductors. The diminished resistance of the abductors rests upon evidence of the most various character.

Thus Jeanseline[16] and Lermoyez showed that in persons dead of cholera the posterior crico-arytenoids are the first of the muscles supplied by the recurrent nerve to lose their contractility. Horsley[17] and Semon have demonstrated the same fact in various animals, and Risien Russell,[18] experimenting on living animals, has shown that the electrical excitability is more readily destroyed in the abductors than in the adductors. Clinical and pathological evidence tend in the most unequivocal manner to the same conclusion. This lesser power of resistance in the abductors is a cardinal fact, which it would seem that any hypothesis pretending to explain the preferential paralysis of these muscles must necessarily reckon with. Again, the peculiarity belongs not merely to the muscle or nerve ending, but to both of these, to the nerve itself, and to its centre in the vago-accessory nucleus. To quote the very judicious words of Semon, it would seem "that there exists an actual difference in the biological composition of the laryngeal muscles and nerve endings, whilst the fact that also in central (bulbar) organic affections such as tabes the cell groups of the abductors succumb earlier than those of the adductors points to the probability that similar differentiations exist in the nerve nuclei themselves. The hitherto obscure phenomenon thus finds its explanation in biological differences between the components of the laryngeal nerves and muscles." This statement sums up all that was known and puts the issue very clearly, but I question whether the phenomenon is one whit less obscure for such an explanation. The assumption—for it is either an assumption or the expression is meaningless—of "a difference in biological composition" takes us no further than a "different resistance to injury," and that is identical with the "proclivity to paralysis", with which Rosenbach and Semon made us familiar nearly fifteen years ago. It seems that the precise difference in biological composition has, in the first instance, to be found, and then that this difference must be connected in the way of cause and effect by the usual methods of observation, experiment, and analogy with a difference of resistance to injury before it can be adduced as an explanation of the ascertained facts. Grützner and Limanowsky (quoted by Semon)[19] are disposed to look for the biological difference in the histological character of the muscles, and that Dr. Semon's speculations tend in the same direction would appear from his commentary thereupon to the effect "that this bio-chemical question has to be diligently studied, as it probably contains the final explanation of the different resistance of the glottis-openers and glottis-closers to progressive nerve-lesions." Now it would seem that the prospect disclosed in these words involves an indefinite postponement of a satisfactory solution. The neurologist will reasonably expect to find an explanation of the observed facts in the principles which he believes to obtain elsewhere in the nervous system, and since he has admittedly to deal with an exceptional instance he will endeavour to account for it by an exceptionally modified causation.

Reverting to the well-established doctrine that the trophic influence of a peripheral motor nerve and muscle resides in the motor cell with which they are centrally connected, it may perhaps be assumed that a difference in resistance to slowly progressive injury is equivalent to a difference in nutritional vigour, and if such a difference can be shown to exist or can be accounted for in the motor cell it is in accordance with neurological principles to expect its existence in the peripheral nerve and muscle also. On these grounds I believe that the true explanation is to be sought in some known distinction, morphological or physiological, between the bulbar centres for the abductors and the adductors respectively. Such a distinction is to be found in the fact that the adductor medullary centre is connected with a higher cortical centre, while no such cortical centre can be found in the case of the abductors (Krause,[20] Horsley and Semon[21]). The facts rest upon experiments which cannot be questioned. The negative proposition—viz., the absence of an abductor cortical centre—finds confirmation in a well-known phenomenon, which is the other great peculiarity in the function of the abductors, an apparent anomaly for which many explanations have been attempted. The purposes of the present argument will justify a digression to consider this point. Referring to the difficulty which existed at the outset of explaining the proclivity of the abductors to paralysis, Semon[22] says: "A satisfactory hypothesis was prevented by a fact hitherto only casually referred to by Schech, to which my attention had been directed while studying the question of abductor

[9] Handb. der Speciell. Pathologie und Therapie, Band iv., ch. 1.
[10] Diseases of the Throat and Nose, 1880.
[11] Diseases of the Nose and Throat, p. 654. New York, 1892.
[12] Diagnosis of Diseases of the Brain, 1885.
[13] Brain, Part 60, p. 485. Quoted by Semon.
[14] Semon, ib., p. 486.
[15] Virchow's Archiv, Band xcviii., Heft 2.
[16] Archives de Physiol., No. 6, 1885.
[17] Brit. Med. Jour., Aug. 28th and Sept. 4th, 1886.
[18] Proc. Royal Soc., vol. li.
[19] Brain, Part 60, p. 490.
[20] Archiv für Anat. u. Physiol. Phys., 1884.
[21] Phil. Trans. Royal Soc., vol. clxxxi., 1890.
[22] Brain, Part 60, p. 481.

paralysis, when I was compelled to observe accurately the position of the vocal cords during quiet respiration. I found that the usual description of the 'rhythmical excursions' of the vocal cords during normal respiration did not apply in the great majority of cases of healthy adults, in about four-fifths of whom the glottis forms an isosceles triangle, which during inspiration is but slightly, if at all, increased and in expiration is just as little diminished in size. Exact measurements by means of graduated mirrors showed that this triangle was two and a half to three times larger than that formed by the glottis after death ('cadaveric position' of the vocal cords). This greater width of the glottis during life, which was not easily explicable *primâ facie*, certainly seemed to point to a greater strength of the abductors in comparison with the adductors, and the fact that these apparently stronger muscles should more easily succumb than the adductors to organic lesions became the more mysterious." In a paper read before the Royal Society in 1890, Semon[23] produced an explanation of this phenomenon, referring it to a reflex tonus of the posterior crico-arytenoid; but it seems to me that it is possible to bring this over-action of the posterior crico-arytenoids into line with other well-known neurological phenomena. It resembles the condition witnessed in the muscles of a limb when their spinal nuclei have been for some time cut off from connexion with their cortical centre, as in lateral sclerosis or in the late rigidity of hemiplegia. It is the negation of the control which the fibres in the pyramidal tract are universally believed to exercise upon the spinal centres with which they are connected. Now if, as is supposed to have been proved, there is no cortical centre for respiratory abductor movements, there may then—as has been partly proved—be no fibres in the pyramidal tract which are connected with the abductor bulbar nuclei (Fig. 2), and the normal over-action of the posterior crico-arytenoids would appear to be but an instance in health of a well-known pathological condition. I would substitute this view for Semon's theory of a reflex tonus.

Turning now to the question of resistance, or relative nutritional vigour, it will perhaps be conceded that in the case of the abductors the medullary nucleus is self-subsisting, as indeed is generally, but, I think, too hastily, assumed

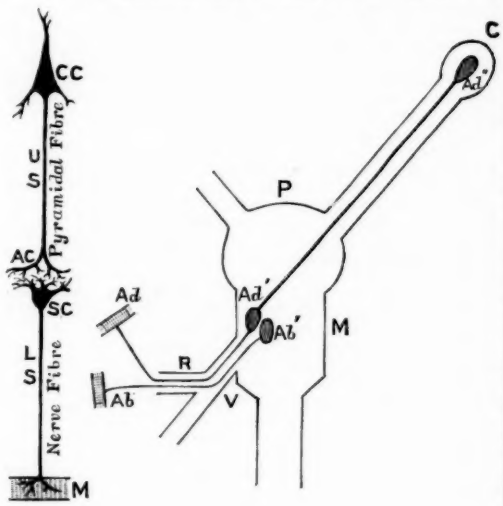


Fig. 1.

Fig. 2.

FIG. 1.—Diagram of an element of the motor path. (After Gowers.) U S, Upper segment. L S, Lower segment. C C, Cortical cell. S C, Spinal cell. A C, Anterior cornu. M, Muscle.

FIG. 2.—Diagram to represent the motor path in the case of the laryngeal nerves. C, Cortex. P, Pons. M, Medulla oblongata. V, Vagus. R, Recurrent laryngeal. *Ad*, Adductor muscle. *Ad'*, Adductor spinal nucleus. *Ad''*, Adductor cortical centre. *Ab*, Abductor muscle. *Ab'*, Abductor spinal nucleus.

[23] Proc. Royal Soc., vol. xlviii., 1890.

in the case of all bulbar or spinal motor cells. The rule to which the adductor conforms, and to which the abductor is an exception, is that the subsidiary motor cell is in organic connexion with another very similar cortical cell by means of a nerve fibre and axis cylinder in all respects resembling that of the peripheral nerve fibre. (Fig. 1.) An important function of the latter is the nutrition of the muscle fibre with which it is terminally connected. May it not be that the cortical cell is also to a degree trophic in relation to the spinal (lower level) motor cell? Analogy would make this probable, and much can be said in favour of the view propounded here. As it is a question of the utmost importance in neurology, I propose to discuss it at some length. The argument from analogy between the two cells and their fibres as to histological structure and arrangement has already been referred to.

In the next place, it would be a tenable position to maintain that, in the nervous system at least, structural continuity and functional unity imply an exchange of nutritional influence. Neither is it necessary to restrict the exercise of this influence to a descending direction in the case of the motor path. Our knowledge of ascending neuritis and of some ascending degenerations in the spinal cord suggests that there is what may be termed a trophic reaction from the periphery to the centre, and that, whilst the nutritional energy resides chiefly in the central cell and is propagated in the direction of its functional activity, it is to some degree dependent upon the transmission of this activity to a healthy terminal connexion. It is enough for my purpose if it be granted that while a lower level motor cell is normally in structural and functional communication with a cortical cell by means of a pyramidal fibre, the stimulus from above may, in default of other stimuli, maintain in greater efficiency the vital energy of the lower cell. If this be so, let us consider the case of a slowly increasing pressure upon a recurrent laryngeal nerve with a view to determining its effect upon the abductor and the adductor fibres respectively. In the former—the abductor fibre—the trophic energy resides solely in the bulbar cell (Fig. 2), and on the hypothesis that the exercise of a healthy function is an aid to nutrition, so soon as the lesion has become so great as to be equivalent to a destruction of the communication between the cell and its muscle fibre, the former begins to be submitted to an influence which tends to destroy it, and which, if continued long enough, will probably do so. The adductor cell, on the other hand, while cut off from its terminal muscle, is in physiological continuity with another cell resembling itself. (Fig. 2.) Its function cannot be entirely suspended, as is that of the abductor cell, since it will have the power to perceive and to register the so-called impulses which are constantly reaching it from the cortex. The word impulse is misleading. It is a question-begging epithet upon which the mind can hardly resist founding a vague and unproved hypothesis, different perhaps to each thinker. I employ the term to avoid paraphrase and in deference to common usage. One thing at least it seems impossible to dissociate from the idea of an impulse, and that is metabolism—trophic or nutritional changes, possibly interchanges, on the part of the originating cell and the receptive or respondent structure, whether cell or fibre. In this way it seems that we can best account for the antispastic control which is exercised by the cortex through the pyramidal tracts. Two alternatives are possible. The first is the assumption of a direct restraint unceasingly exercised by the higher level cell upon that below. The other may be stated thus: the spinal motor cell—the more automatic—is the principal source of energy; left to itself, this energy is excessive under ordinary circumstances, and results in the over activity which is observed pathologically in spastic paralysis, and, as I believe, normally in the remarkable abductor tonus; but while a healthy connexion with the higher centre is maintained, the excess of energy is permitted to overflow upon the cortex, as to a reservoir. According to this view, the function of the cortex in volitional action would be to return the excess of energy through the spinal cell to be transformed into work at the muscle fibre. It follows that the two cells, cortical and spinal, divide between them the function and consequently the nutritional force of the entire nervous chain, and that the one cell is subsidiary and supplemental to the other.

The above speculation is intended rather to illustrate the theory proposed here than as a postulate for its support. Upon its validity in no way depends the probability of the main contention—viz., that a spinal motor cell in functional continuity with a cortical cell is by virtue of its function at a nutritional advantage. The case that I have taken—

that of pressure on the recurrent laryngeal nerve—does not differ essentially from one of central (bulbar) progressive lesion. Here also the unsupported abductor cell, functioning in one direction only, cut off from impressions from above and the accompanying healthy nutritional changes, may be thought to resist less and to die sooner than the more favourably constituted adductor cell. To this contention it is of course no answer to urge that a spinal cell when cut off from its cortical connexion does not die. It is admitted that the abductor nucleus lives and discharges its function without such a connexion. The statement is that in its absence the unsupported nucleus more readily succumbs, and this is in accordance with facts. It is of interest to inquire whether a spinal cell separated *pathologically* from the higher centre is apt to suffer in the same way. If this could be shown, my contention would derive a large measure of support. I am acquainted with one case which may be interpreted in this way. I am indebted to Sir William Broadbent for an opportunity of observing it closely and of watching the electrical reactions daily over a period of some months. The patient was an elderly woman suffering from diabetes mellitus; while in this condition she had an attack of cerebral hæmorrhage and right hemiplegia. When she came under my notice eighteen months later the right arm and leg were completely paralysed, but there was a total absence of late rigidity, and the muscles of the paralysed limbs alone exhibited marked degenerative reaction and all the evidence of neuritis. Now diabetic neuritis tends to be symmetrical, and its presence on the paralysed side alone in this instance is strongly suggestive of an impaired resistive power on the part of the spinal centres which were separated from their cortical connexions. Further evidence of this kind, if it exists, should be easily obtained. Meanwhile the view adopted here may be thought to have the advantage of explaining the facts upon a principle already admitted; it demands nothing from the unknown; it brings the exception within the rule in the only logical manner by eliminating the effect of an absent element of causation; and it explains at once and upon the same grounds both anomalies of abductor function.

I am indebted for many of the references to Semon's bibliography in *Brain*, Part 60, 1892.

Wimpole-street, W.

CÆSAREAN SECTION AT THE BEGINNING OF THE SIXTH MONTH OF PREGNANCY FOR PELVIC OBSTRUCTION FROM A LARGE TUMOUR OF THE UTERUS; DEATH.

By C. J. CULLINGWORTH, M.D. DURH., F.R.C.P. LOND., M.R.C.S. ENG.,

OBSTETRIC PHYSICIAN AND LECTURER ON MIDWIFERY AND DISEASES OF WOMEN, ST. THOMAS'S HOSPITAL.

A MARRIED WOMAN thirty-five years of age was admitted under my care into the Establishment for Invalid Gentlewomen on Oct. 1st, 1892, having been sent home ill from abroad. She had been married five months. The catamenia before marriage had always been regular and profuse, but the quantity had not been increasing. She had menstruated from April 11th to the 16th, was married on April 27th, and had not menstruated since. She was in fairly good, but not robust, health until six weeks after marriage. She was then suddenly attacked, whilst sitting up, with violent pain in the right iliac region, and had to be put to bed. A swelling in the lower part of the abdomen was then noticed for the first time. The pain varied in intensity from day to day, but on the fourth day the patient was so ill as to be pronounced to be in danger, and it began to be suspected from her symptoms, and especially her ghastly pallor, that she had had some internal hæmorrhage. She had been seriously ill ever since, requiring opiates to relieve the intense pain, though during the latter part of the illness her colour had to some extent returned. There had been continuous loss of flesh and increase in size of the abdominal swelling. No hæmorrhage or other discharge from the vagina had occurred throughout. On admission the emaciation was very marked, the complexion of a fairly good colour, and the temperature normal. The patient was very weak and prostrate. The abdomen was prominent, chiefly anteriorly, the prominence extending from an inch and a half above the umbilicus to the pubes. There was no bulging at the flanks. The abdominal wall moved slightly with each respiration. There was dulness on percussion over the whole swelling, extending five inches to the right of the umbilicus. The right flank was resonant, the left completely dull. There was tympanitic resonance in the epigastrium and below the costal margins on each side to the extent of a finger's breadth. Above the pubes was a hard, irregular, solid swelling distinctly bulging; it measured five inches in breadth and reached three and three-quarter inches upwards from the pubes in the middle line. There were two or three separate hard lumps felt beneath the abdominal wall. Fœtal movements were distinctly felt to the left of the umbilicus. The maximum girth of the abdomen, two inches below the umbilicus, was thirty inches. The distance from the umbilicus to the pubes was seven inches, to the ensiform cartilage five inches, to the anterior superior spine of the right ilium six inches, and to that of the left ilium six and a half inches. Per vaginam, the right side of the vaginal vault was depressed by a swelling continuous with that felt immediately above the pubes. The cervix uteri was pushed quite over to the left side, not softened, and of normal size. A distinctly pulsating artery could be felt running across the roof of the vagina. The uterine sound was cautiously passed to the extent of five and a quarter inches; the direction it took was upwards and to the left, into the midst of the abdominal swelling. The nature of the swelling to the right of the cervix was uncertain, but, from the history, it appeared most likely to be an inflamed tumour of the ovary or broad ligament. The case, though a desperate one, needed that something should be done promptly, and it was decided to ascertain, if possible, the nature of the complication by means of an exploratory incision in the middle line of the abdomen.

AT 9 A.M., Oct. 6th, the following operation was performed with the assistance of Mr. Leonard A. Bidwell and Dr. Arthur E. Giles. On opening the abdominal cavity it was evident that the tumour formed part of the pregnant uterus. There were several small fibroids distributed over the surface of the uterus and it seemed certain that the large tumour displacing the cervix was of the same nature. As the abdomen had been opened, and as delivery *per vias naturales* was obviously impossible, it was decided to deliver there and then by Cæsarean section. The fœtus occupied the upper and left part of the abdominal swelling. An opening was made in the anterior wall of the uterus above the tumour, and a female fœtus 13½ in. in length was quickly extracted, along with the placenta and membranes. (The weight of the fœtus was afterwards ascertained to be 25½ oz., and that of the placenta 5½ oz.) There was profuse hæmorrhage from the upper part of the uterine incision, which was controlled by digital pressure. The uterus, which contracted irregularly, was now lifted out of the abdomen to facilitate compression and suturing. The cervical canal, enormously elongated and lying to the left of the tumour, would not admit the finger. The uterine wound was closed by deep and half-deep silk sutures. The peritoneal cavity, into which very little blood or fluid had escaped, was cleansed by sponging and the uterus replaced. The abdominal wound was closed by means of silkworm gut sutures. The patient was by this time extremely collapsed. When the dressings had been applied she was lifted gently into bed. The collapse increasing, Mr. Bidwell opened the femoral vein, and allowed five pints of warm saline solution to flow in from an ordinary douche-can through an enema nozzle. The effect was striking. The colour and temperature improved; the pulse became again perceptible, and the hollow appearance about the eyes disappeared. A celluloid catheter was passed up the cervical canal to ensure drainage, and the legs were bandaged. During the afternoon the patient's condition was alarming, but it improved after the administration of stimulants, subcutaneously and by enema. There was no sickness, and beef-juice and brandy-and-water were taken freely throughout the day. In the evening the condition was fairly satisfactory, but in the afternoon of the following day the patient became restless and unconscious, and she died at 10 30 P.M., a little more than thirty-six hours after the close of the operation. No necropsy was permitted.

Remarks.—In stating, in the course of some remarks appended to a report of three cases of Cæsarean section which recently appeared in the "Mirror of Hospital

Practice,"[1] that all my cases of that operation had now been published, I had for the moment forgotten the one now placed on record. A case reported by Dr. Herman brought it to my recollection. The diagnosis of the nature of the tumour was exceedingly obscure. Perhaps the fact of its being solid ought to have suggested its true character in spite of the history, every detail of which was wholly contrary to ordinary experience in cases of pregnancy complicated by fibroids. The absence of any noticeable abdominal swelling or increasing menorrhagia before marriage, the extreme pallor and collapse early in the pregnancy, the severe and long-continued pain, and the great emaciation were all of them unusual and misleading features. In the absence of a post-mortem examination the precise relations of the tumour and even its nature remain matters of inference only; but there seems little doubt that it was a large fibroid originating either in the lowest part of the right side of the body of the uterus or in the supra-vaginal portion of the right side of the cervix, distending the broad ligament of that side and completely blocking the inlet of the pelvis. Looking back upon the case, I fail to see what other line of treatment could have been adopted. Porro's operation, the ideal one for pregnancy complicated by the presence of a large obstructing fibroid, was here unfortunately quite impracticable.

Brook-street, Grosvenor-square, W.

REMARKS UPON TWENTY-EIGHT CASES OF ADULT FEMALE GENERAL PARALYSIS ADMITTED TO THE ROYAL EDINBURGH ASYLUM DURING THE FIVE YEARS 1889 TO 1893.[2]

BY FRANK ASHBY ELKINS, M.B., C.M. EDIN.,
SENIOR ASSISTANT PHYSICIAN, ROYAL EDINBURGH ASYLUM.

THE following table (Table I.) shows both the total annual admissions to the Royal Edinburgh Asylum during the last twenty years, and also the total annual admissions of general paralytics during the same period. It will be seen that the total annual admissions have increased considerably, and that the admissions of general paralytics, both male and female, have increased in a slightly greater ratio:—

TABLE I.

General Paralytics admitted to the Royal Edinburgh Asylum during the Twenty Years 1874 to 1893.

Annual total admissions.			Year.	Annual admissions of general paralytics.		
Male.	Female.	Total.		Male.	Female	Total.
151	157	308	1874	23	3	26
148	162	310	1875	18	3	21
180	180	360	1876	22	6	28
174	168	342	1877	17	3	20
205	160	365	1878	16	7	23
173	172	345	1879	15	0	15
160	187	347	1880	20	3	23
162	177	339	1881	16	1	17
143	186	329	1882	11	2	13
164	189	353	1883	17	2	19
161	181	342	1884	14	1	15
139	165	304	1885	7	4	11
170	164	334	1886	13	3	16
185	180	365	1887	13	4	17
172	176	348	1888	19	2	21
172	151	323	1889	25	5	30
155	177	332	1890	22	5	27
191	179	370	1891	31	8	39
214	219	433	1892	30	7	37
215	211	426	1893	30	11	41

[1] THE LANCET, Dec. 2nd and 9th, 1893

[2] A paper read at the annual meeting of the Medico-Psychological Association held at Dublin on June 12th, 1894.

During the five years 1889 to 1893 there have been twenty-eight adult and eight developmental female general paralytics admitted, as the following table (Table II.) shows at a glance.

TABLE II.

Admissions of Female General Paralytics.

Year.	Adult.	Developmental.	Totals.
1889	5	0	5
1890	3	2	5
1891	7	1	8
1892	5	2	7
1893	8	3	11
—	28	8	36

Has general paralysis among women increased?—Of the thirty-six cases admitted during the five years eight belonged to a newly discovered variety of the disease, and from this cause the total numbers of female general paralytics have gone up. Omitting the developmental cases, there is but a very small increase. Judging from these cases, if there has been any increase of female general paralytics admitted to asylums during recent years it seems to be accounted for, first, because milder cases of insanity are now certified, and, secondly, because diagnosis is more perfect. Undoubtedly many of the milder female cases would formerly have been treated in poorhouses or in their homes. Indeed, at the present time cases far advanced in the disease reach the asylum from the poorhouse or their own homes, where they have lived for months or years in a state of bodily and mental enfeeblement. With our improved clinical methods, and with a broader knowledge of pathology, very few female general paralytics can nowadays escape tabulation. It seems, therefore, very doubtful if general paralysis in women has increased in recent years.

Developmental cases.—A new variety of general paralysis, which has been named by Dr. Clouston "developmental general paralysis," has during recent years been observed, and several writers have now noted cases. During the five years 1889 to 1893 eight such cases, all females, have been under observation in the Royal Edinburgh Asylum, and for a description of them the reader must be referred to a paper by my colleague Dr. James Middlemass.[3] Only those cases in which the disease came on after full mental and bodily development are considered in this paper.

Lack of proper history in many of the cases.—Many of the cases had led immoral lives, and from that cause alone had no respectable friends to give a reliable history. Many had come from the poorhouse, whither they had drifted when they found themselves homeless and without friends, and several were picked up by the police aimlessly wandering in the streets, so that it is not wonderful that the histories obtained regarding many were imperfect, and that in some cases histories were absent altogether. In addition to this, the memory is early affected in general paralysis, and thus many of the patients were unable to tell anything about where they had come from or what they had lately been doing.

Age on admission.—The average age on admission was about forty, and this is much what would be expected, for general paralysis is mostly a disease of the prime of life. The oldest admitted case was fifty-one, and the youngest only twenty-five. It might be asked as regards this last-named case, Why is she regarded as an *adult* general paralytic, and how does she differ from a developmental case? The answer is that in the one case the woman is fully matured sexually, has married, and has borne children, whereas in the other there is no development mentally or bodily beyond the girlhood stage of life, and menstruation had not begun.

Heredity as to insanity.—In two of the cases there was the unusual history that the mother had been insane.

Kind of women affected by general paralysis.—It is rare indeed to come across a female general paralytic who before her illness could be described as ugly. Most of them have been well developed and good-looking, and in this agree with the male general paralytics. Many of them are described as having been much admired by men, and as being charming wives and companions. Most of them, too, knew how

[3] Journal of Mental Science, January, 1894.

to dress and make a good appearance, and they were intelligent, so that of almost none would it be fair to say that they had been fools. But as to their morality no class of female patients ranks lower. Seven of the twenty-eight are known to have led immoral lives, several others had certainly had syphilis, and twelve had been habitually alcoholic. One of the most respectable of all the cases, a woman who had led a good life for twenty years, voluntarily told us she had had syphilis in her youth; and where a proper history was obtained it more frequently revealed a bad and dissolute than a good life.

Rarity of general paralysis among females of the upper classes.—Dr. Clouston in his book on Mental Diseases states: "I have only seen three females in the rank of ladies suffering from general paralysis." The case of one of these three is included among the twenty-eight. She had led a wild life, and had what was believed to be a specific eruption on her body. Syphilis must be much rarer among ladies than among females of the lowest classes, where general paralysis is more common. The same remark, however, would apply to alcoholic and other excesses.

The type of the disease is milder in women than in men.—The twenty-eight cases have been divided roughly into mild and acute. Twenty were found to have had mild attacks, and eight were acute cases. Some of the latter were quite as acute as the worst male cases and ran a rapid course, but from these figures it is at once seen how much milder the type of the disease as a rule is in woman. Many of the cases were well advanced in the disease before there was any urgent necessity to send them to the asylum. So many female general paralytics are, so to speak, "colourless" cases of insanity that it leads one to think that not a few end their days in their homes or in the hospital wards of the poor-house undiagnosed. Even in asylums these cases may not be diagnosed for some time, and for the general practitioner these "colourless," mildly demented women must be very difficult to diagnose as general paralytics.

Grandiose delusions.—Ten of the twenty-eight cases, at some time in their illness, had grandiose delusions.

The suicidal impulse and general paralysis.—General paralysis soon goes on to a facile, good-natured mental enfeeblement, and therefore the suicidal impulse is rarely seen except it be at the very beginning of the attack. Three of the twenty-eight cases had a suicidal propensity in the early stage of their illness.

"Congestive" attacks.—Of the twenty-eight cases no less than fifteen had either epileptiform or apoplectiform "congestive" attacks; in five of the cases there is no record of any "congestive" attack; in three the subsequent history from the time they left the asylum till their death does not warrant a conclusion one way or another; and of the six living cases only one up to the present has had a "congestive" attack.

Remissions.—Five of the cases had remissions of such a decided character that they were discharged "recovered" from this or other asylums, but all found their way back in less than fifteen months from their discharge. Three other cases are of interest on account of partial remissions. One was boarded out in the country for four years as a chronic, harmless, insane person, one was nursed in a poorhouse hospital for two years before she needed asylum treatment again, and another is at present living at home and gives but little trouble.

Duration of illness.—In giving the length of the illness remissions have been discounted, and the time reckoned from the first onset of the mental symptoms. Of the twenty-eight cases one has been quite lost sight of, six are known to be still alive, and twenty-one have died. Taking first those who have died, the length of their illnesses was as follows: 3 lasted under one year; 6 lasted under two years; 3 lasted under three years; 2 lasted under four years; 1 lasted under five years; and 1 lasted under six years. Judging from the length of illness of those who have died it would seem that general paralysis in females is quite as rapidly fatal as in men. Of the six cases who are still alive, 3 have lasted under two years, 2 have lasted under three years, and 1 has lasted under five years.

Post-mortem examinations.—In fourteen of the twenty-one cases that died there were post-mortem examinations which confirmed the diagnosis. The pathological signs did not differ from those usually found in males.

Dr. Mickle on general paralysis in women.—For comparison it seems important to quote Dr. W. Julius Mickle, whose book on General Paralysis has made him the leading authority on the disease in Great Britain. In an article contributed to Dr. Hack Tuke's "Dictionary of Psychological Medicine" he thus summarises his experience of the course of general paralysis in women: "In females general paralysis runs a milder and longer average course than in males, and its remissions are less frequent and less marked. Mentally there is more often a quiet dementia; physically, spinal symptoms are less often decided, the ascending form of general paralysis is more rare, the chief special seizures are less frequent and severe; on the contrary, the hysteriform seizures occur in women chiefly. At the onset the menses may be irregular, or later become suspended. Rey found in the hysterical cases frequently eroticism and maniacal excitement with continued mobility. The hysteria yields ground to the general paralysis. Régis finds general paralysis occur very rarely in hysterical women."

Syphilis as a cause of general paralysis.—In Germany and Denmark it is the commonly accepted belief that general paralysis is caused in most cases, if not in all, by syphilis. Most of the British alienists do not agree with this opinion. Much may be said on both sides, and the question is as yet, it seems to me, an open one. In this particular the causation of the new variety—developmental general paralysis—becomes important. Both Dr. Clouston and Dr. Middlemass, who have studied very carefully the eight cases admitted during the last five years, conclude that in them hereditary syphilis played a most important, if not *the* important, part in their etiology, for in no less than six of the cases there were very strong evidences of its existence both from the hereditary history and from the examination of the patients themselves. Can it be possible that a hereditary syphilitic taint, plays a part in adult general paralysis? My colleague Dr. G. R. Wilson wrote a paper[4] in which he advocated a "diathesis of general paralysis." Many of the facts he there stated would be consonant with the theory that the general paralytic, in consequence of a hereditary syphilitic taint, has inherited a brain liable to general paralysis. On this supposition such a brain, under certain unfavourable circumstances, is liable to take on general paralysis, just as the lungs of certain persons predisposed to phthisis pulmonalis are liable to take on that disease. Leaving the question of hereditary syphilis, it has been proved over and over again, by Dr. Savage and others, that a larger proportion, at least of male general paralytics, than of the other insane have had syphilis. The history of a typical general paralytic is that he has led a life such as would make it extraordinary if he had not contracted syphilis. The same, it seems to me, applies to female general paralytics, many of whom have led immoral lives, in the course of which they have contracted syphilis. Yet many women are infected with syphilis, and only a few of a certain type become general paralytics. It is true, of course, that syphilis has many manifestations, and that general paralysis may be a rare one. Those who believe in the specific theory ask, Why is it that general paralysis is an unknown disease in remote country districts, and that, for instance, a Highlander from a secluded country place has first to live in or near a town before he can develop general paralysis? On the other hand, a man with an inherent brain instability tending towards restless activity is sure to find his way to an urban district. Why should general paralysis mostly affect those who are above the average in physical and mental development rather than the degenerate? And why do the ordinary specific remedies so efficacious in other syphilitic manifestations entirely fail in general paralysis? It has been strongly asserted that all general paralytics have not had syphilis. No doubt this is a somewhat difficult case to prove. I will take, for instance, the case of the woman who for twenty years had led a perfectly good life, and yet spontaneously volunteered the information that she had had syphilis in her youth. Only one of the twenty-eight female general paralytics showed signs upon her body of having had syphilis, yet it is a well-known fact that, where a person has had syphilis and afterwards develops tertiary brain lesions, the superficial signs discoverable are more than likely to be slight or not present at all. In a memoir[5] on the "Etiology of Progressive Paralysis, with Special Reference to Syphilis," by Dr. Emil Hougberg, assistant physician of the Imperial Lappvik Asylum at Helsingfors, the conclusions arrived at are: "(1) Progressive paralysis, which attacks males much oftener than females, is a disorder especially of urban populations, but does not there

[4] Ibid., January, 1892.

[5] Allgemeine Zeitschrift für Psychiatrie, vol. xv., p. 546. 1894.

occur among women of the higher classes; (2) syphilis has a very great part in the etiology of progressive paralysis, while it does not play any important *rôle* in other psychoses; (3) the outbreak of progressive paralysis, usually between the thirtieth and forty-fifth year of life, does not commonly occur until four or five years after the syphilitic infection; (4) the symptoms of the specific disorder are commonly relatively mild; (5) in comparison with syphilis, hereditary predisposition, psychic causes, alcoholic excesses, sexual excesses, and traumatism have only a subordinate part in producing paresis; (6) of the different forms of the disorder the maniacal type was most frequent, next the demented, and, lastly, the melancholic; (7) the prognosis is unfavourable; the duration of the disease was under four years in 82·9 per cent. and under two years in 43·6 per cent.; remissions occur; (8) in cases preceded by syphilis there are no symptoms specially characteristic of specific disease; (9) no improvement was observed from anti-syphilitic treatment; (10) at the autopsy no appearances of specially specific character were found." To sum up, it must be admitted that those who hold that syphilis is a cause of general paralysis have received some support from recent investigations; but there are some strong arguments against this conclusion, and it does not seem to me that a definite statement on this point is as yet justifiable.

General paralysis in husband and wife, both of whom had had syphilis.—The husband of one of the cases died from general paralysis, and there was a very distinct history of his having given his wife syphilis. In the *Chicago Medical Recorder*[6] Dr. Richard Dewey records "three cases of general paralysis in husband and wife, with syphilitic infection in each case certain or very probable." Such cases are admittedly rare and do not seem to me to help one towards any conclusion as to the relationship of syphilis and general paralysis. There are at present in the asylum two husbands and wives, and I have known several others who suffer from insanity other than general paralysis, but it would be an unsafe conclusion that the circumstance was other than accidental.

The children of general paralytic women.—Considering the lives many of the women have been known to lead it is not wonderful that they leave behind but few children. Very few of the women seemed to have healthy children living, and none had large families.

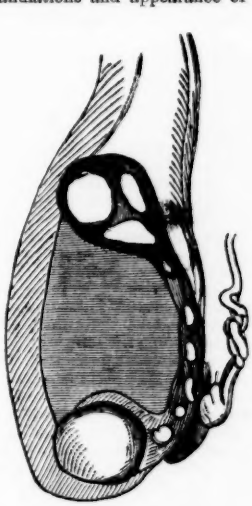
Edinburgh.

SOME INTERESTING CASES OF DISEASE OF THE TESTES.

BY S. OSBORN, F.R.C.S. ENG.

CASE 1. *Tuberculous testis.*—A married man aged forty, with no children, complained of swelling of the left testis, which had been first noticed two months previous to my seeing him. He had no knowledge of ever having hurt himself and was not in the habit of taking horse exercise. The swelling took about a fortnight to get to its present size (4 in. by 2½ in.), since which time it has remained the same size, with, if anything, slight increase. There was no pain in the testis itself, but slight pain was complained of in the groin. There was no history of any tumours in his family; the father and mother had died of old age, but there was a decided history of phthisis in the family, one brother having died from it, and three sisters. The testis was nodular in form; the upper and lower parts, corresponding to the situations of the epididymis major and minor, formed distinct swellings, the upper one being very painful. A collection of hydrocelic fluid was present about the centre of the swelling, which on being tapped gave off about six ounces of pale, amber-coloured fluid. He was under observation for about three weeks, taking the syrup of the iodide of iron three times a day. The hydrocelic fluid reaccumulated, but all pain disappeared, and he expressed himself as never having felt better in his life. Fluctuation was detected in the circumscribed swelling at the lower part of the epididymis, and he was consequently admitted into St. Thomas's Home, where I removed the left testis under the usual antiseptic precautions. The arteries were secured with catgut ligatures and a drainage of horsehair left in the wound. The testis was but slightly affected with tubercle, the epididymis being more especially affected. A distinct abscess was present at the lower part, and also breaking down in the upper. (See engraving.)

Remarks.—The hereditary taint was the sole cause of origin. An interesting feature in the case was the presence of the hydrocele, which previous to tapping completely masked the character of the disease. The fluid that was withdrawn was perfectly clear, and the tunica vaginalis was devoid of all granulations and appearance of tubercle; the



inflammation of the tunica vaginalis which produced the collection of hydrocelic fluid was due to the visceral inflammation, especially marked at the lower part of the organ.

CASE 2. *Varicocele.*—A clerk aged eighteen came with a large varicocele on the right side, which he had had for about three years. He could not say that he actually suffered pain from it; there was only a constant dragging sensation which drew his attention to it and produced much depression. He had always been a good athlete and was not aware of any injury as the cause. On careful inquiry from the patient as well as from the family physician it was elicited that the right testicle had been the first to descend into the scrotum, and that this one had always hung the lower of the two. The testis was slightly atrophied. After taking him into a home hospital antiseptic excision of the varicosely dilated veins was performed, the cord and spermatic artery being held aside by an assistant and the wound closed with a horsehair drain. Strict asepsis was maintained, and the patient left for the seaside fourteen days after the operation.

Remarks.—The interest of this case lies in the presence of the varicocele being on the right side. The frequency of this occurrence is more common than is generally supposed and when present is due, in my opinion, to an irregularity in descent, the right having been the first to descend into the scrotum in place of the left, as is usually the case—a point that I have previously maintained.

CASE 3. *Neuralgia testis.*—A single man complained of pain, not constant, in the left testis, which had been first noticed about two and a half months previously after sexual intercourse, in which the patient had been over-indulgent. There was a "slight uncomfortable feeling" about the right testis. Pain was most severe on walking and of a neuralgic character, shooting up into the groin. The testes were somewhat flaccid, and the epididymis major and minor of the left side were somewhat enlarged. The patient had had gonorrhœa many years previously, but no enlargement of the testes followed. Testicular sensation was present on both sides. The spermatic veins were slightly varicose, and the superficial scrotal veins were enlarged and congested. The scrotum was pendulous. Under the use of a suspensory bandage, cold bathing, syrup of iodide of iron, and an ointment made up of acetate of morphia (five grains) and ointment of spermaceti (one ounce) the thickening about the epididymis became less, but the pain remained and proved most difficult of relief. He was under observation for some time, the pain still continuing and the spermatic veins becoming mo-

[6] October, 1893.

varicose, but yet not sufficiently so as to warrant operative interference. The pain, however, according to his account, became more and more intense. It was proposed to perform excision of the varicosely dilated spermatic veins with a view to at the same time remove some of the nerve structures and relieve him of the intense pain. In the meantime the patient married, and according to his account the pain, which was probably purely hypochondriacal, disappeared, although he had placed himself under treatment for months and had agreed to have the operation performed.

CASE 4. *Gouty orchitis.*—A widower aged sixty-nine came under my notice for shooting pains in both testes, but more frequent in that of the left side. The pain was increased by manipulation, and there was an absence of all heat or sign of acute inflammation. In fact it bore a very close resemblance to the last case, only the character of the two patients was entirely different. This patient was stout, red-faced, and plethoric generally. He repudiated the idea that he had ever had gout, but allowed that he had had occasionally eczematous patches on his arms and legs, and that his urine was at times thick and red-coloured. The left testis became somewhat enlarged, but never acutely painful, and proved most obstinate to treatment. The enforced rest brought on a typical attack of gout in his foot, and the swelling in the testis almost immediately subsided. The treatment by alkalies and a claret-glassful of Hunyadi-Janos water every morning completed the cure.

Remarks.—The above case shows that there is a form of gouty orchitis of a subacute character as well as that of an acute variety.

CASE 5. *Syphilitic orchitis and hydrocele.*—A married man aged forty-five about three or four years ago first noticed a swelling in the left testis, which disappeared without any treatment. Last year the same testicle again began to increase in size, unaccompanied by any pain. He consulted Sir H. Thompson, who prescribed ointment and on Feb. 12th tapped the swelling, upon which about half a pint of light-amber-coloured fluid was withdrawn. On March 2nd the patient was to all appearances well and had discontinued using the suspensory bandage. From the 17th to the 24th he again became much debilitated in health, and on April 4th the left testis again began to gradually increase in size. No history was obtainable of syphilis, although the patient was subject to sore-throat and had brown discolourations on his skin. He had been resident in China for fourteen years, but never suffered from pendulous scrotum, but in fact more from the other condition, that of strong contractility. When seen on May 5th there was some collection of hydrocelic fluid on the left side, and the left testis was both larger and harder than natural, and its outline irregular. He was ordered syrup of phosphate of iron (one drachm) in water three times a day, and good dietary. The hydrocele was not tapped. It size was 3½ in. by 2¼ in. On June 2nd the hydrocelic fluid had become completely absorbed, and the left testis, which was now quite distinctly felt, was enlarged, very hard, not tender, and, in fact, never occasioned him any pain. Its size was 2½ in. by 2 in. He was to continue taking tonics and to live well generally. On June 5th he came with a decidedly ulcerated patchy sore-throat and was then placed under syphilitic treatment, to which it yielded. On July 6th the swelling had gone down very considerably, and the patient stated that he had never felt better. The size was 2 in. by 1½ in. He was still taking iodide of potassium. On Sept. 15th the decrease in size had continued, but it was still larger than the right. Its size was 1½ in. by 1¼ in. He was taking the syrup of the iodide of iron, and when seen on Oct. 12th the left testis was the same size as the other.

Remarks.—The case was one undoubtedly of syphilitic orchitis, complicated with hydrocele. The treatment showed that by treating the cause of the disease the second complication of hydrocele could be left alone. The fluctuation in the size of the testis previously to his coming under my care is to be attributed to the rise and fall of his barometer of health. Improvement in health by tonics helped to reduce the enlargement at the outset of the treatment, but from June 2nd the reduction was much more rapid under the combined treatment of tonics and antisyphilitic remedies.

CASE 6. *Double hydrocele.*—A married man aged fifty-eight, who had never resided in India, but had lived in Berlin and Russia and had always been very fond of gymnastics, though he had given them up for fifteen years, first noticed enlargement of the scrotum three and a half years ago. He had been tapped two or three times. Three years ago the left side was tapped and injected by Mr. Durham. The patient was again tapped about six months ago, but whether on the right or left side he was unable to state. He was very stout and had an umbilical hernia. When first seen on Sept. 22nd he suffered from an accumulation of fluid in the tunica vaginalis of both sides. From the right side about one and a half pints were withdrawn, and from the left side, that which had been previously injected, about two and a half ounces of reddish brown fluid were withdrawn, similar to what one would expect after a previous injection of iodine solution. On Feb. 20th there was a reaccumulation of fluid on the right side, and about one quart of yellow fluid was withdrawn. There was no reaccumulation on the left side. On coughing and straining, impulse was given to the accumulated fluid, and probably some communication existed with the abdomen on the right side; after tapping, a scrotal truss was applied to exert pressure upon the canal of that side. On May 28th there was a reaccumulation of fluid to a very slight extent, and the use of the scrotal truss had undoubtedly been of service. On Aug. 31st the right side was again tapped, but only about half a pint was withdrawn. The patient objected to any attempt at radical treatment, although that performed on the left side had proved satisfactory; moreover it was not pressed, as the fluid was not being poured out with the same rapidity as before and the periods between the tappings were being increased. Eight months have now elapsed since the last tapping, and no increase in size of any moment is present, proving that repeated tappings will sometimes cure the disease, although in this case the application and pressure of the truss may have acted as a factor in the case.

CASE 7. *Scirrhus and hydrocele.*—The patient was a married man aged forty-five, with one child. This is an interesting case as being almost identical with another case of a man two years younger, brought to me by Dr. Clapperton of Winchester. He had had enlargement of the right testis for about three years, which during the last six months had made very rapid growth. There was no history of syphilis or of phthisis in his family. He had always been accustomed to much riding exercise. He had never been abroad. He had been under mercurial treatment without effect for two or three months. At one time there was much accumulation of fluid in the sac, but this had become absorbed. When seen the testicle was very hard, measuring six inches by four inches, and with a slight collection of hydrocelic fluid at the upper and lower parts. The mercurial treatment was ordered to be immediately discontinued. Tonics were given, and he was ordered to come again in a fortnight's time. On Feb. 20th the patient felt better, but the swelling of the testis was no smaller, and excision was recommended to be performed at once. This was carried out on the 24th in a similar manner to that in Case 1, with the strictest aseptic precautions, and the patient left his bed eighteen days after the operation, the enlargement proving to be scirrhus of the right testis.

Remarks.—Cases 1, 5, and 7 all showed secondary hydrocele due to transmission of inflammatory action to the visceral layer of the sac of the tunica vaginalis. This last case points out the fallacy of believing too many cases of enlarged testis to have a syphilitic origin. It is far better to treat with tonics and improve the system generally, which would meet either case, than to debilitate the patient by mercurials, which in such a case as this could only be detrimental.

Maddox-street, W.

NOTE ON NON-PATHOLOGICAL CATARACTS.

BY W. J. COLLINS, M.D., M.S., B.Sc., D.P.H. LOND.,

FELLOW OF THE UNIVERSITY OF LONDON AND OF THE ROYAL COLLEGE OF SURGEONS.

THOSE who are in the habit of minutely observing the conditions of the media of the eye in large cliniques cannot fail to come across, not very infrequently, opacities in or about the crystalline which do not appear to own a pathological origin. Negative history as regards antecedent inflammation, and collateral evidence arising from the normal appearance of neighbouring structures, compel inquiry for some physiological or embryological explanation.

That such is sometimes forthcoming in the shape of abnormalities arising out of the events consequent upon the formation of the parts adjacent to the lens, presumably related to the mesoblastic intrusion, I have suggested in a paper upon the Capsulo-pupillary Membrane which I contributed to the Moorfields Hospital Reports some six years ago. The explanation there given was as follows:—

"The deeper portion of the vascular mesoblastic intrusion which takes place after the formation of the secondary optic vesicle, and between this and the epiblastic lens, surrounds the latter with a complete tunic and obtains its blood from the hyaloid artery, a branch of the arteria centralis retinæ. When the iris later on sprouts from the choroid, and its anterior margin advances centripetally, leaving at first coloboma and pupil, and lastly pupil only, a portion of the vascular tunic of the lens or capsulo-pupillary membrane is intercepted by the iris and lies in front of it, while their vessels, anastomosing, effect a junction between the anterior surface of the iris at the corona and the intercepted portion, which is henceforth the pupillary membrane. Posteriorly, this membrane retains for a time its connexion with the rest of the lens tunic, which latter, when no longer vascularised by the hyaloid artery, fades into the capsule of the lens. It is easy to see how by the failure in one or other of these successive steps, by which the final condition, which we recognise as normal, is arrived at, the different vestigial abnormalities referred to may be determined. Proceeding from behind forward, we may have: (1) a persistent hyaloid artery or patent canal of Stilling; (2) some opacities, occasionally seen in children in the hyaloid fossa, may not improbably be due to the retention of, or opacification of, or failure to clarify of some portion of the posterior part of the capsulo-pupillary tunic; and (3) *some instances of circumscribed opaque plaques on the anterior surface of the lens, either with or without connecting threads with the iris; possibly, too, some of those cases of anomalous juvenile capsular cataract, and of otherwise inexplicable anterior polar cataracts, may be referable to persistent and more or less altered portions of this temporary vascular membrane.*"[1]

In addition to these varieties I drew attention to the now better recognised examples of persistent capsulo-pupillary and pupillary membranes. It is to sub-class 3 to which I now desire more specially to direct attention. I have recently seen three instances in adults of well-defined opaque plaques in or on the anterior lens capsule, midway between the equator and the pole, about 1·5 mm. by 0·5 mm. in size, with the long axis in a meridian line. These, and cases of this kind, are not striæ in the lens, but opaque plaques in or on the capsule, the lenses being quite normal as seen by magnification with a + 20 D, and I submit their origin is embryological and not pathological. Such cases should be regarded as mere fœtal vestiges, and not as being cataractous. I have known one case in a woman where much worry was quite unnecessarily occasioned by such opacity having been termed a cataract—a term which seems to be second only to cancer or consumption in the dread it is capable of inspiring in the minds of some of the laity.

Most English text-books accept the usual explanation of anterior polar or capsular cataracts by way of corneal perforation and its consequences to an extent which would seem almost to exclude an embryological explanation of any opacities in that region. Soelberg Wells more guardedly remarks: "Anterior central capsular cataract may be congenital, but is more frequently found in early childhood in consequence of a perforating ulcer. If it is congenital, and there are no traces of iritis or of an ulcer of the cornea, it is probably due to some intra-uterine arrest of development." In regard to opacities at the posterior pole the same writer says: "In very rare instances this may be congenital, and is in all probability due to imperfect retrogression of the hyaloid artery." Ammon of Dresden in 1858[2] had called attention to an "indentation of the posterior capsule, which is at times octagonal, at others quadrangular. Later, this disappears, probably through distension of the lens capsule by the growth of the posterior pole of the lens." He adds: "I do not quite understand the meaning and cause of this peculiar appearance, but it seems likely that it may have some influence on the development of quadrangular, congenital, posterior cataract." Since I have searched for opacities at the lens poles which seem to disown pathological explanations I have been struck by their relative non-rarity, and I believe that further research will confirm their connexion with, and relation to, the fœtal vascular envelope of the lens. Even in the common form of anterior polar cataract the usual contact theory is increasingly felt to be insufficient; thus De Wecker writes:[3] "Evidemment il y a donc ici encore un point étiologique qui nous échappe, et les formes congénitales de cataracte capsulaire antérieure ne sauraient être exclusivement rapportées à un contact prolongé avec une cornée perforée, et cela d'autant moins que la chambre antérieure n'est en quelque sorte que virtuelle pendant la vie intra-utérine."

In my paper of July, 1888, I figured two forms of opaque plaque of the lens capsule connected with persistent capsulo-pupillary membrane, one central and one excentral; since my paper was written others have argued a fœtal origin for central capsular cataracts. I would now urge that in excentral opacities, often meridionally and sometimes nearly equatorially placed, a similar explanation sometimes obtains.

Albert-terrace, Regent's park, N.W.

[1] Royal London Ophthalmic Hospital Reports, vol. xii., part ii., p. 198.
[2] Archiv für Ophthalmologie, vol. iv., part i., p. 59.

OCCLUSION OF RECTUM ABOVE ANUS BY A MEMBRANOUS SEPTUM; OPERATION; DEATH; NECROPSY.

BY E. BARNARD FULLER, M.B., C.M., F.R.C.S. EDIN.,
LATE HOUSE SURGEON AND LATE HOUSE PHYSICIAN, ROYAL INFIRMARY, EDINBURGH.

ON May 4th of this year I was called to see an infant four days old. It had passed no motion from the bowels since birth, had suffered from vomiting, and was unable to sleep, constantly moaning and crying. The infant was lying with its face somewhat pinched, uttering a constant low moaning cry. The pulse was hardly perceptible at the wrist. The abdomen was enormously distended, tense, and tympanitic. The infant was a native, so that the colour of the skin was disguised. The penis and testicles were normally formed, as was the anus; externally nothing abnormal was to be detected. On inserting the nozzle of a small glass syringe into the anus it passed in naturally; when, however, the attempt was made to inject fluid it failed, none whatever passing in The little finger was now inserted into the anus and after dilating the sphincter passed in normally for about one inch, when it impinged on a firm resistant membrane completely obstructing all communication with the lumen of the bowel beyond. The diagnosis formed was that of a membranous septum in the rectum preventing passage of bowel contents, or, on the other hand, absence of the upper part of the rectum. It having been decided that the probabilities were in favour of the former diagnosis, and regarding the procedure as partially diagnostic, the following operation was performed. The cannula of a medium-sized trocar cannula was guided through the anus and up to the membrane, along the little finger. Having placed the cannula in the centre of the membrane and directed it backwards in the probable line of the gut above, the trocar was introduced through the cannula and the membrane punctured. On withdrawing the trocar a large quantity of dark-brown meconium gushed through the cannula. A pair of dressing forceps was pushed up alongside the cannula and inserted into the hole in the membrane as the cannula was withdrawn. The blades were opened, the hole was dilated, and still larger quantities of meconium gushed through the anus. It was slightly checked, as it was feared that the sudden withdrawal of such large quantities of matter might cause collapse. It was hoped that the child would now completely recover. The rectum was ordered to be gently washed out with a little warm water occasionally. On May 5th the meconium had continued to flow naturally. The child had dozed occasionally, but still moaned and cried often. Nourishment was taken fairly. The abdomen was still greatly distended, in spite of the relief to tension from the operation. It was now feared that there was some further condition preventing recovery. The child gradually sank and died late on the evening of the same day, about thirty hours after the operation.

Necropsy.—The rectum about an inch from the anus contained a thick fibrous septum, which was perforated in its centre by a considerable hole caused by the operation. The

[3] Traité Complet, tome ii., p. 876.

rectum between this and the sigmoid flexure was enormously enlarged. About the centre of this portion was a large hole (almost admitting three fingers), with black, ragged, sloughy edges, evidently caused some considerable time before death. In the parts of the abdomen adjacent were quantities of extravasated meconium. The abdomen was enormously distended with flatus, and the intestines were collapsed.

Remarks.—The operation in itself was successful, and if it could have been performed two or three days earlier would probably have saved the child. The pressure of the retained contents of the intestine had evidently caused a rupture in the bowel prior to the operation. The above deformity, I believe, is exceedingly rare, and therefore worth recording, the most common malformation being closure of the anus itself. It was most unfortunate that surgical aid was not sought earlier.

Cape Town, South Africa.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON SUPERNUMERARY NIPPLES.

BY FREDERIC C. COLEY, M.D. DURH.,
SENIOR PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, NEWCASTLE; PHYSICIAN TO THE NORTHERN COUNTIES HOSPITAL FOR DISEASES OF THE CHEST.

IT is now well known that supernumerary nipples are by no means very uncommon, although they are usually so slightly developed as to be very easily overlooked. I have seen a considerable number of these freaks of nature, but I never met with a case in which a supernumerary nipple was recognised as such by its possessor. I once pointed one out, and explained its nature, to a patient on whom I noticed it while examining her chest. She was afterwards much amused to find my diagnosis confirmed by the fact that it secreted milk when she was suckling. Supernumerary nipples may occur in either sex, but they are less commonly recognised in males. It may be that they are not really less common, but only that (their development being in proportion to that of the normal nipples) supernumerary nipples occurring in the male sex are usually too small to be distinguished from ordinary "moles" without microscopical examination of their structure. They may be found on any part of the body, but are by far most common on the anterior aspect of the thorax, generally below, and somewhat internal to, the normal mammilla. They are comparatively rarely multiple; but in a case which seemed to me to be interesting enough—from a developmental point of view—to be worthy of record I found two fairly well developed supernumerary nipples symmetrically placed. They were just on the axillary folds and therefore, of course, above and external to the normal glands. In another case, which I saw more recently, there were two supernumerary nipples, symmetrically placed, below and internal to the normal ones. Lines drawn from the supernumerary nipples through the normal ones, and produced upwards, would have passed through the site occupied by the supernumerary nipples in the case above mentioned. It would appear, therefore, that there is a tendency in the human subject to the formation of a double row of nipples, as in quadrupeds; but that these two rows are not parallel, but converging downwards.

Eldon-square, Newcastle-on-Tyne.

A CASE OF OSTEOMA OF THE PELVIS.

BY ARTHUR J. WALLACE, M.B. EDIN.,
DEMONSTRATOR OF OBSTETRICS AND GYNÆCOLOGY, UNIVERSITY COLLEGE, LIVERPOOL.

THE patient, an unmarried woman thirty-four years of age, consulted her medical attendant in November, 1893, on account of the state of her general health, and also mentioned casually to him that for about a year she had noticed a "lump" in her abdomen. It was quite movable and painless; therefore she had not paid much attention to it. Visiting Liverpool at Christmas, she sought the advice of Dr. Telford concerning the "lump." He, finding that it was really the uterus displaced upwards by another mass lying in the pelvis, brought her to see my father, Professor Wallace. She stated that her health was below par, and that she suffered from aching pain in the lower part of the abdomen, which was worse at night; latterly there had been constipation. Nine years previously she had had an attack of what she called "sciatica in both hips," which lasted fourteen days. In the summer of 1891, whilst she was endeavouring to move a shop fixture from the wall, she strained herself, immediately afterwards suffering severe abdominal pain and vomiting. Menstruation began at fourteen years of age and was perfectly normal in every respect.

The patient was anæsthetised in order that a thorough examination might be made. To the eye the abdomen appeared normal; but on palpation the lump which the patient had noticed was felt rising from behind the pubes and reaching as high as the level of the anterior superior iliac spines. It was about the size of a hen's egg and was proved by bimanual examination to be the uterus pushed forwards and upwards by a hard mass which the finger in the vagina encountered about an inch and a half from the ostium vaginæ. This mass occupied the greater portion of the true pelvis, leaving between its surface and the pelvic wall, on the left side and in front, a crescent-shaped space, which extended from the left sacro-iliac synchondrosis forwards and to the right as far as the right ilio-pectineal eminence, and possessed a uniform width of 1¼ in., except towards the extremities, which tapered abruptly. The uterus lay in this space, and the body was movable along the greater part of its extent, the cervix less so. The rectum passed through it on the left anterior aspect of the tumour. The latter, examined per rectum, was found to project about an inch above the pelvic brim and was of globular shape and of perfectly stony hardness; its surface was rounded and smooth, though in parts grooved so as almost to resemble the sutures of a fœtal skull, as in McKibbin's case.[1] It was attached by a broad base to the second, third, and fourth pieces of the sacrum and was quite immovable. The intercristal diameter of the pelvis measured 10½ in., and the distance from the tip of the first sacral spinous process to the upper border of the symphysis pubis was 7¼ in. The diagnosis made was that of simple bony growth springing from the sacrum, and in this Dr. Telford quite concurred.

The patient was seen lately, four months and a half after the first examination; no change was to be detected in the condition of the pelvis or tumour, but the general health was restored. This, in conjunction with the solidity and uniformly hard surface of the tumour, leaves little doubt but that it is really a simple osteoma. Under anæsthesia the fingers passed per rectum could be swept over the whole surface, and nowhere was there the least yielding, or even elasticity, to be felt.

The condition is a rare one. In the last edition (1893) of Schroeder's "Midwifery" five cases only are admitted, those of Naegele, Leydig, McKibbin, Behm, and Marchent; Winckel, however, mentions nine, in six of which the growth sprang from the sacrum. Cazeaux and Tarnier relate but three cases. The case I report is interesting in that it came under observation quite independently of any question of pregnancy or labour. Should the patient marry and conception occur, interference would be imperative.

Gambier-terrace, Liverpool.

[1] Edin. Med. Jour., 1831, p. 352.

THE METROPOLITAN ASYLUMS BOARD.—The returns for the fortnight made at last Saturday's meeting show a slight falling off in cases of scarlet fever, the number being 2286, as compared with 2300 in the previous two weeks reported; of diphtheria 239, as compared with 233; and of enteric fever 89, as compared with 79.

BELGRAVE HOSPITAL FOR CHILDREN.—The annual meeting of this hospital was held on Wednesday last, under the presidency of the Duke of Westminster. The report stated that the attendances for the past year reached 4353, the number of inmates being 225. Attention was drawn by the chairman to the low state of the hospital exchequer. He hoped that the hospital would be more widely recognised and that the necessity for closing a ward would be obviated by the generous support of a benevolent public.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

MIDDLESEX HOSPITAL.

TWO CASES OF SUPPURATION OF THE TESTICLE.

(Under the care of Mr. H. MORRIS.)

WE publish this week the notes of two cases of abscess of the testis, in one of which it followed epididymo-orchitis of gonorrhœal origin. It is a result of that inflammation which is very rarely met with in practice, and this is at first a matter for surprise, considering the extreme severity of the symptoms, both general and local, arising in so many instances during an attack of gonorrhœa. The explanation of the fact is found in the great development of the lymphatics in the testicle and their origin in wide lacunar passages between the seminal tubules, the results of inflammation being thus easily absorbed. So rare is abscess of the testicle after gonorrhœal inflammation that Robert taught that tubercle was always present in these cases and was really responsible for the suppuration. It would appear that in Mr. Morris's case there was no tubercle present, as none was found on microscopical examination of the hernia testis, which unexpectedly formed, and which was treated with success on a conservative plan. In the second case the abscess does not appear to have had any urethral condition as a cause; it may have been of gouty origin; abscess is very rare, however, as a sequence of gouty inflammation.

CASE 1. *Suppuration followed by fungus testis occurring after gonorrhœa, but attributed to a strain, treated by ablation of the fungus and closure of the opening in the scrotum.*—A young man twenty years of age was admitted into Brodrip Ward at the Middlesex Hospital on Nov. 30th, 1893. He was a fair-complexioned, healthy looking man. He stated that on Nov. 15th, after lifting a heavy mangle, he noticed a slight swelling, accompanied by pain, in the right testicle. This continued for two or three days and then slowly disappeared, to return again a few days later. The same recurrence and disappearance of the swelling were repeated half a dozen times. On each occasion the swelling was attended with great pain, and micturition was also very painful. On Nov. 28th the swelling and pain in the right testicle returned and soon became so severe that walking, micturition, and defecation became unbearable. He then applied for medical advice, and was treated by lotions to the scrotum and the administration of medicine, but without relief, so he applied for admission. On admission the testicle was much swollen, both the epididymis and body of the testis being involved, but the epididymis somewhat more so. The whole organ was very hard and resistant, being acutely painful and tender, especially over the lower half. The spermatic cord was not enlarged, or the vas deferens harder or larger than normal, nor was it more tender. The right side of the scrotum was extremely red and œdematous. On squeezing the penis a small quantity of thin, yellowish-white pus escaped at the meatus. The urine was acid, sp. gr. 1030; it contained a little albumen, and microscopically a little pus was found; there was no blood. Micturition was accompanied with much pain, and was unduly frequent. His previous history was very good indeed. He denied ever having had syphilis; he had suffered from a slight sore-throat in 1880—that is, when a boy of seven; he had an attack of gonorrhœa in June which lasted three weeks, and then, as he believes, he became and remained quite well. He was unaware of the slight gleet detected since his admission to the hospital, and he attributed the testicle trouble entirely to his strain in lifting the mangle. The ordinary treatment for acute orchitis was followed by great relief and improvement, but on Dec. 13th a small circumscribed abscess was forming over the front and middle part of the testicle. On the 14th a grooved needle detected pus, and on the 15th a small incision was made by the house surgeon. Though the incision was not a deep one it was followed by the discharge of some pus, mixed with blood, and a whitish-looking solid material like testicular substance. Under the microscope, however, there was no tubular structure detected, and the material had the appearances of inflammatory and suppurating tissue. The day after the testicular abscess was opened a little pus was let out from beside the nail of the left great toe. Two days later (Dec. 18th) a large slough appeared through the scrotal wound and a large fungus of the testicle formed. This was for some days treated by dusting over its surface the red oxide of mercury powder; this caused considerable drying up of the surface of the fungus, but as it continued firmly attached deeply Mr. Morris on Dec. 26th cut away the fungus, pared the edges of the scrotal tissues after dissecting them free of the adherent testicle, and then shut in the testicle by uniting the scrotal incision by seven silk sutures. Before closing the wound the cut surfaces of the testis and scrotum were rubbed with iodoform gauze and iodoform. The wound was dressed with dry boric lint and covered with a little gauze and a bandage. Healing went on rapidly to completion, and the patient left the hospital well on Jan. 17th, 1894.

Remarks by Mr. MORRIS.—Though the patient attributed the inflammation of the testicle to a strain, the course and history show it to have been due to deep urethral irritation started by a gonorrhœa and kept up by a slight gleet. The pain in micturition which attended every attack of recurring testicular swelling, the pain on defecation in the last attack, the enlargement of the epididymis to a greater extent than of the body of the testis, all point to a deep urethral cause. It is likely that some slight injury to the testis during the strain may have determined the attack of epididymo-orchitis by weakening its resisting power to the pus microbes which found their way along the vas deferens. The absence of induration and tenderness of the vas, together with the intermittent swelling and pain of the testicle, point to the microbes being conveyed directly to the epididymis and there setting up a mild inflammatory attack. The general good health of this young man offered, no doubt, great resistance to the earlier attacks and to the spread of the inflammation in the organ, which only after several repetitions of the onslaught of the bacilli yielded to a general acute inflammation. The progress of the attack to the suppurative stage, and that, too, in the testis proper rather than in the epididymis, makes the case still more rare and exceptional.

CASE 2. *Double chronic orchitis; abscess in right testis.*—A man aged fifty-one was admitted to Middlesex Hospital on Dec. 21st, 1892. His family history was good. He had always had good health. There was no history of gonorrhœa, syphilis, injury, gout, or rheumatism. In October, 1892, the patient got a chill; he shivered and vomited. At the same time his right testicle began to swell; it was painful, not very tender, and soft. Since then it had decreased in size and got gradually harder. He was sent to bed by his medical attendant and treated with hot fomentations. On Dec. 18th he had a repetition of his former symptoms and his left testicle began to swell; it was very painful and tender. Since then it had not decreased in size, but the pain had become less. On examination of the right side the skin was found to be dark purple, fairly tense, thickened, and œdematous; translucency could not be obtained. The right testis formed a hard, heavy, oval swelling the size of a turkey's egg which was not painful or tender. It was smooth and slightly adherent to the skin below and externally. The cord was not thickened and could be felt free above the tumour. The left side of the scrotum was slightly larger than the right, the skin being reddish. The cord was free and not thickened. The testis formed a large, fairly hard tumour, non-adherent to the skin, and slightly painful and tender. Posteriorly it was especially tender. The glands in the groins were not enlarged. The urine was normal. On Dec. 26th there was much less tenderness over the left testis, together with more obvious signs of abscess in the right testicle. On Jan. 1st, 1893, the left testicle was very much better and smaller than the right by comparison, and perhaps harder. On the 10th the patient felt quite comfortable; he had no pain, and thought the testicles were gradually decreasing in size. On the 13th an incision was made, and about a teaspoonful of dark-coloured pus escaped. (It was verified to be pus by the microscope.) On Jan. 14th he continued to be easy, and thought that the

testicles were becoming smaller. There had been a discharge of white creamy pus from the opening in the right testicle since the abscess was opened. On Feb. 2nd the opening had healed up, but another one had appeared lower down, from which there was some pus discharged. The discharge ceased for a day or two, but returned slightly on Feb. 8th. On March 1st the patient left the hospital. The testicles were much smaller; the discharge had ceased and the wound had healed. The patient has since been heard of as being well.

Remarks by Mr. MORRIS.—No cause could be assigned for the inflammation in this case. A great variety of medicinal treatment was tried; but the only drug under which the testicles seemed to improve was salicylate of soda, which the patient continued to take for several weeks and right up to the time of his leaving the hospital.

GOVERNMENT CIVIL HOSPITAL, HONG-KONG.

A CASE OF ATTEMPTED SUICIDE; RECOVERY; REMARKS.

(Under the care of Dr. J. MITFORD ATKINSON.)

A MAN aged thirty-six, a coolie, was admitted to the Government Civil Hospital, Hong-Kong, on March 23rd, 1893, at 8 P.M., with a police order stating that he had attempted to commit suicide. He was very much exhausted from loss of blood and quite insensible. On examination Dr. Atkinson found that there were extensive injuries to the urethra and scrotum, and a very severe compound depressed fracture of the frontal bone. The reason why he inflicted these injuries was because his sweetheart had just died, and he had no money to pay for her funeral expenses, having spent all his money in paying for medical attendance during his *fiancée's* long illness. As this was expected of him, and knowing that he could not do it, out of shame he determined to kill himself, and he had inflicted all these injuries with a Chinese chopper. The forehead was covered with the usual Chinese tobacco (native styptic), on removing which a large hole was seen in the frontal bone 2 in. in length by about 1½ in. in width and from 1½ in. to 2 in. in depth, situated some 3 in. above the root of the nose just to the right of the median line; the skin in front of this had been simply slashed to pieces. On reflecting the remains of this it was found that the dura mater had been torn by the depressed pieces of bone, and through the rent brain matter was protruding. Several small vessels were twisted, seven or eight pieces of bone which were pressing on the dura mater were removed, and the wound was carefully syringed out with a 1 in 1000 corrosive sublimate solution. The skin was drawn together as far as possible and sutured, and a pad of carbolic oiled lint was applied. Attention was now paid to the scrotum, and this was found to be slashed about in an indescribable way. The urethra was cut across in three or four different places; the torn and lacerated scrotum had so contracted that there seemed to be no skin left; the left testicle was hanging out of the wound, and half the right testicle had been removed; the rest of this was removed, and the skin was brought together by means of some fifteen sutures. It was found quite impossible to restore the urethra; accordingly a No. 7 silver catheter was passed through the proximal end into the bladder, the edges of this opening being attached to the skin. Brandy in the meantime had been given, and by this time the patient had slightly regained consciousness. Half a grain of morphine was injected and the patient put to bed, the pulse being 140 and the temperature 101° F. Orders were given to the sister to watch him carefully, although it was scarcely expected that he would survive through the night. On March 24th, however, the patient was much better in the morning, his pulse being quieter; he was quite conscious, and there were no signs of any paralysis; the temperature was 102° and the pulse 96. For the next few days he was in a critical condition. On March 28th an enema of olive oil was given, which acted.

On April 2nd, about 3 P.M., the wardmaster reported that the patient had had a sort of fit, the whole of the body being convulsed, and that the patient was quite insensible. This insensibility lasted for a few minutes. Dr. Lowson was called to see him, and by the time he arrived the patient was conscious, though somewhat dazed. The wardmaster did not notice where the convulsions originated. The patient was ordered a grain of mercury with chalk every four hours, and this was continued for some time. On April 4th, in the evening, he complained of pain in the left leg; this continued for some time. The catheter was removed on April 5th, and as it was found that he could control his urine it was not reinserted. On April 16th a note was made that there was a large hole in the frontal region the size of a dollar, about one and a half to two inches in depth, at the bottom of which cerebral pulsation could be plainly seen, covered with slight granulations. From this date he steadily improved, and became practically well.

The after-history of the case was as follows. The patient was detained in the hospital on account of the urethral trouble; there were no further head symptoms. The following note was made on July 31st: "Wound in forehead only some one-third of an inch deep; the skin has grown over the base of the whole, starting from the edges, two-thirds of the area by this time being covered." Dynamometer: the right, 60; the left, 60. No signs of any paresis, sensation perfect, and eyesight and memory good. On Aug. 14th and again on Sept. 1st operations were performed on the urethral fistula with complete success, the channel of the urethra being restored, and he was discharged passing his urine naturally on Oct. 7th.

Remarks by Dr. ATKINSON.—This is another case showing that extensive injuries may occur to the greater part of the frontal lobe without paralysis ensuing. The injury in this case to the right motor area was evidently irritative and not destructive; hence the convulsions on April 2nd.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tachycardia and Cardiac Pain following Influenza.—Acanthosis Nigricans.

THE last ordinary meeting of this society for the present session was held on June 12th, Mr. HUTCHINSON, the President, being in the chair.

Dr. SANSOM contributed a Review of Cases manifesting Pain at the Heart, or Morbid Acceleration of the Heart's Contractions (Tachycardia) subsequently to Influenza. He had submitted to review and analysis the evidence in 100 cases under his own observation, in which pain referred to the heart, disturbances of the cardiac rhythm, or structural disease had been manifested after attacks of influenza. The cases were thus distributed: pain at the heart, 23 cases; morbid acceleration of the heart's action (tachycardia), 37 cases; irregularity (arhythmia), 25 cases; abnormal retardation of the heart-rate (bradycardia), 5 cases; organic disease, 10 cases. The present communication dealt with the first two sections of cases. The pain experienced in the region of the heart was in some cases paroxysmal; in others more or less protracted. The paroxysmal pain in some cases resembled that of angina pectoris. It might be intense and occur with extreme suddenness, so that some patients fell completely unconscious. It was observed that in some unconsciousness might occur paroxysmally in the absence of severe pain. There were not the associated signs of true angina pectoris. Hysteria was excluded, for several patients were men, and some typical athletes, who had been in perfect health until their attack of influenza. In the cases manifesting more constant pain, the beating of the heart was often accompanied by subjective discomfort; there were sometimes tender spots in the intercostal spaces close to the sternum, with more deeply seated pain in defined situations, and in several instances symptoms of concomitant neuritis involving some of the nerves proceeding from the brachial plexus. In regard to pathology Dr. Sansom considered that the symptoms might be due to a neuritis affecting some of the ganglia of the cardiac plexuses, or to a disturbance of the sensorium analogous to that in epileptiform neuralgia or in visceral neuralgia. In treatment quinine in five-grain doses with antispasmodics, morphia sparingly and cautiously administered subcutaneously, and a course of the bromides and iodides with arsenic were

considered the best agents. The evidence showed that good results might follow the use of a weak continuous galvanic current from the nape of the neck to the region of the vagus. Morbid acceleration of the rate of the heart's action (tachycardia) was found to be the most frequent of all the cardiac disorders induced by influenza. It might occur immediately after the attack or be manifested after the lapse of several months. It might continue for long periods—at least eighteen months. In many cases the heart was very irritable, quickened action being provoked by very slight causes or occurring at intervals without assignable cause. The evidence showed that post-influenzal tachycardia might be accompanied by many of the symptoms, or even by all the cardinal signs, of Graves' disease—a circumstance which was of interest in the question of the pathology of the latter affection. After reviewing the evidence concerning the pathology of post-influenzal tachycardia, Dr. Sansom considered it to be most probable that the initial cause was a disturbance of the vagus at its origin or in some parts of its course, whereby its controlling power over the cardiac contractions became impaired. It was possible that irritative lesions of the accelerator nerves of the heart, in the cord, in the course of the sympathetic filaments or in the ganglia, might be concurring causes, and in some cases hypersecretion by the thyroid might be a subsidiary cause. In the treatment of post-influenzal tachycardia drugs seemed to be inefficacious except as modifying the associated symptoms. There was evidence, however, to show that the systematic use of weak continuous galvanic currents from the nape of the neck to the region of the vagus might be followed by good results.—Dr. ALTHAUS said he regarded the paper as a contribution to scientific as well as to practical medicine. Till recently there had been published no account of the sequelæ of influenza, although the general symptoms of the malady had been fairly accurately described since the thirteenth century. But the same remark applied to syphilis and other infectious diseases. With reference to the remark of Dr. Sansom that hysteria was unlikely because the patients were males, it should be borne in mind that hysteria was met with in a considerable number of men. He agreed with the treatment which had been adopted, but he added that he had employed salicylate of soda with much benefit in the early stages of these cases, while later a combination of phenacetin and caffein gave admirable results. The continuous galvanic current was useful, a good effect being obtained by one milliampère. As to the cause of the tachycardia, though there might be in some a peripheral neuritis of the vagus, he thought that the cardiac and vaso-motor centres in the bulb were more at fault. He had never seen vomiting in these cases, though it ought to be common in peripheral neuritis of the vagus. He had seen polyuria, glycosuria, and albuminuria all follow influenza, and this rather suggested the medulla oblongata as the seat of the lesion. As to the pathology of Graves' disease, some French observers had considered it to be a neurosis which left no anatomical evidence in the nervous system, while German physicians had attributed it to perverted nutrition of the thyroid body. He himself had regarded it as an organic disease of the medulla oblongata, and he rested his conclusion on both clinical and experimental grounds. It had been shown in animals that if the restiform bodies were injured the symptoms of Graves' disease would be produced, and the results of necropsies on the human subject had revealed degenerations in different parts of the medulla. He had never seen an instance of complete recovery from Graves' disease, the mortality from which was very considerable, even as high as 50 per cent., and in some who died very suddenly the cause appeared to be failure of the cardiac centre in the medulla.—Mr. SPENCER WATSON asked Dr. Sansom what were the signs by which it was possible to distinguish tachycardia and heart pains due to influenza from those due to other causes; and whether any group of cardiac symptoms consecutive to epidemics of influenza had not before been seen in association with other diseases.—Dr. DOUGLAS POWELL, after paying tribute to the great importance of Dr. Sansom's paper, asked whether he had been able to prepare a table of his cases giving the salient points, such as age, sex, interval between the influenza and onset of symptoms, together with any other important facts. He asked him also whether he had been able to trace actual organic disease of the heart in any of his cases to the influenza. He inquired what was the result of examination of the urine in cases which had exhibited cardiac phenomena shortly after an attack of influenza, as in his own experience of such cases there had been an enormous excess of urea, and the specific gravity occasionally rose as high as 1040. He endorsed Dr. Sansom's views with reference to digitalis and other drugs of that class—they were practically useless in these cases. It was well known that a considerable period of time frequently elapsed before the onset of nervous phenomena after an attack of influenza, and the same thing occurred in other infective diseases, such as diphtheria.—Dr. THEODORE WILLIAMS had seen both tachycardia and slowing of heart at considerable periods after influenza. He noticed that Dr. Sansom attributed these symptoms to neuritis of the cardiac ganglia. He asked if other neuroses, such as spasmodic asthma, had been observed consequent on influenza. He himself had not done so; and yet, if the ganglia were involved one would expect some such symptoms to occur. If influenza were chiefly a neurosis it was difficult to explain the other phenomena, such as pneumonia, abscess of the lung, &c. He regarded the poison of influenza as a general poison, with special liability to affect the nervous system. He, like Dr. Sansom, was able to speak highly of the value of sumbul, which in full doses relieved cardiac pain in men as well as women.—Dr. SANSOM, in reply, said that he had intended to construct a table, but when he began the work he found that to include all the facts that he had observed would have made his paper too long. The chain of evidence between the influenza and the sequelæ seemed to be complete in his cases, and he had never observed a similar grouping of symptoms without a previous attack of influenza. He agreed that salicylate of soda was good in the early stages and in the pyrexial period, but he had been chary of pushing it on account of the liability of its producing toxic effects. Phenacetin and caffein he had found very valuable. As to the question of absolute recovery in Graves' disease, he had seen some very bad cases get absolutely well, except for an occasional outburst of emotional disturbance to which so many women were liable. As regarded the urine he had noticed exceptionally large quantities of nitrogenous products excreted and sometimes albuminuria. He had never seen glycosuria in post-influenzal tachycardia, though he had met with it in Graves' disease. Although he had never seen a typical case of spasmodic asthma due to influenza, yet he had seen several cases of marked dyspnœa of a peculiar character often spoken of as "tachypnœa." There seemed to be a general consensus of opinion that the symptoms noted were due to changes in the central nervous system, and these changes might, he suggested, be minute hæmorrhages. If these hæmorrhages occurred in a region which impaired the function of the vagus, then tachycardia would result; but if they occurred lower down bradycardia and cardiac irregularity would be produced.

Mr. MALCOLM MORRIS showed a case of Acanthosis Nigricans. The patient, a single woman aged thirty-five, was admitted into St. Mary's Hospital on Feb. 15th, 1894, suffering from widely disseminated discolouration of the skin with diffuse warty growths in various parts. Previously to the appearance of the lesions her health had been good, but for more than a year before the onset of the disease menstruation had been very irregular, chiefly on the side of excess. In October, 1893, she noticed general bronzing of the skin over the upper part of the body, and crops of large, flattish warts came out on the hands, in the axillæ, on the umbilicus, and elsewhere. This was soon followed by the appearance of black patches in various situations, but mainly where wartiness was most marked. On admission she looked wasted and weak, but her temperature was normal, and there was no evidence of disease of any of the internal organs. The skin over nearly the whole of the body was rough, and for the most part distinctly bronzed, with the exception of the face, which was the seat of a permanent deep blush; the natural folds were almost everywhere exaggerated, particularly in the neck and on the hands, where the skin felt like rough piled velvet. Round the neck there was a wide band of blackish discolouration, which spread downwards in front between the mammæ and some way on the abdomen; similar patches were seen in the axillæ, the bends of the elbows, and the popliteal spaces. The axillæ were occupied by masses of warty growths deeply fissured here and there; from the fissures there oozed an offensive discharge which seemed to have washed the staining material out of the middle part of the papillomatous mass. A few small warts were scattered about the face and the lower part of the forearm on the flexor aspect. The umbilicus was the seat of a button-

like wart of considerable size, surrounded by a black zone; from this wart an offensive discharge exuded. A few warts were scattered about on the thighs, and there were general roughening and thickening of the skin, particularly on the soles of the feet, with bronzing about the knees and ankles and yellow discolouration of the soles. There were masses of warts in each auditory meatus, and the patient was partly deaf in consequence. The mucous membrane of the lips, cheeks, palate, and gums was wrinkled, dry, and warty; there were large warts with deep fissures between them on the tongue. A similar condition existed in the vagina. The throat was unaffected. The black stains were found to be caused by masses of tiny granules situated in the superficial layers of the epidermis; on microscopic examination they were found to consist of dried epithelial scales with no trace of pigment. The warty growths were papillomatous in structure. The condition gave rise to no subjective symptoms except an uncomfortable dryness of the lips and mouth. While the patient was under observation the black discolouration spread over the whole of the abdomen and over the back as high as the middle of the scapula. There was some further development of warts on the scalp and in the lumbar region. A thick growth of light-coloured hair took place on the face, and to a less extent on the chest and abdomen. Slight improvement was noticed in some parts, especially on the hands, knees, and feet. The patient's general condition continued fairly good, but she had become very nervous, and the knee-jerk was absent on both sides. The umbilical growth had been removed, and the warts in the ears had been treated with salicylic acid with some success. The case was submitted as an example of the disease called by Unna "acanthosis nigricans." Only two similar cases had been recorded (Pollitzer, Janovsky). Nothing was known as to the pathology of the condition. Dr. EDDOWES produced some sections taken from Pollitzer's case. A great deal of the discolouration appeared to be due to dirt, as was the case in ichthyosis. He suggested that there was a close connexion between this condition and seborrhœic eczema. He asked if thyroid extract had been tried.—The PRESIDENT asked what could have let loose this remarkable increase in growth of papillæ. He had seen parts of cases with the same tendency, but which did not run to such an extreme degree, and he mentioned a case under the care of Dr. Thin, published in the Society's Transactions, in which there had been a rapid growth of minute warts in a child. Mr. MALCOLM MORRIS, in reply, mentioned that the urine had been normal throughout. He thought the condition was probably due to some central nervous lesion. He had seen no other case involving the mucous membrane, or with symmetry of distribution; but he had seen one slight case of velvety skin following injury to a nerve. There was, in his opinion, no association with eczema seborrhœica. In the present instance the disease began, according to the patient, about the neck and face.

OBSTETRICAL SOCIETY OF LONDON.

Ligature and Division of the Upper Parts of both Broad Ligaments and the Result as compared with that of Removal of the Appendages.—A Case of Adenoma of the Portio Vaginalis Uteri forming a Depressed Sore or Ulcer.

A MEETING of this society was held on Wednesday, June 6th, Dr. G. E. Herman, President, being in the chair.

A paper was read by Dr. Remfry on Ligature and Division of the Upper Parts of both Broad Ligaments and the Result as compared with that of Removal of the Appendages. A case of bleeding fibroid was cited in which the above operation was performed as an alternative to oöphorectomy, the latter being impossible owing to the conditions present. The procedure was compared with that of oöphorectomy—(1) anatomically, especially as regards the circulation; and (2) as to the result. The principal theories concerning the amenorrhœa after removal of the appendages were mentioned and discussed. Changes in the circulation with lessening of blood-supply to the uterus were considered to form the chief factors in its causation, a theory supported by the history of the case given. The blood-supply of the broad ligament was illustrated by an injection experiment.—Dr. PETER HORROCKS had never himself seen a case where both ovaries had been completely removed and yet menstruation had continued for any length of time. Operators knew how difficult it was in many cases to be quite sure of removing the ovaries entire. He had never been able to find the nerve which was said to influence menstruation, and he would be glad of proofs of its existence. There could be no doubt about the influence of the nervous system on menstruation. He quoted cases of amenorrhœa from shock, but he still believed the ovaries were essential to menstruation, and that, while ovulation could take place without menstruation, menstruation could not take place without ovulation.—Dr. DUNCAN said that, though the previous speaker had seen no case in which the catemenia continued after removal of the ovaries and believed that when such an occurrence happened it was due to incomplete removal of the organs, he (Dr. Duncan) had had four cases in which many months after complete removal of the appendages the patients suffered from mennorrhagia, to account for which he was at a loss except that the ligature tying the stumps of the pedicles were perhaps causing irritation. Again he had had several cases in which the ovaries and tubes were so completely matted down in the pelvis that, although he was able to tie the stumps beyond the ovaries, still he had thought it safer, in cutting across the pedicle, to leave a little of the firm ovarian tissue so as to prevent slipping of the ligatures and yet in none of these cases had there been any subsequent menstruation. He believed that so long as no ovarian tissue was left at the proximal side of the ligature a little left on the distal side was of no moment.—The PRESIDENT thanked Dr. Remfry, on behalf of the society, for his report of an interesting case. Other cases had been published, in which the broad ligaments had been tied, by Dr. Murphy in the Society's Transactions, vol. xxvii., and by Dr. Kilner Clarke in 1893;[1] and in these menstruation was not arrested. It had been proposed to tie the broad ligaments in order to arrest the growth of malignant disease. Dr. Remfry's case, with the others he had referred to, had an important bearing on this proposition.—Dr. AMAND ROUTH thought that the possibility of an intra-uterine polypus as a cause of continued hæmorrhage after oöphorectomy should always be considered. He had dilated the uterus in three cases of persistent hæmorrhage after oöphorectomy, finding a polypus in two, and a cluster of villous growth in the other. He believed that the ovaries influenced menstruation through the medium of ganglionic nerves passing between the ovary and the uterus, and it must be remembered that these nerves were to a great extent removed during oöphorectomy, so that they could not be altogether ignored as a cause of menstruation.—Dr. REMFRY, in reply, said he thought the shock theory of amenorrhœa in this case was improbable, considering the slightness of the operation and the fact that menstruation did not return for three months. He did not agree that removal of the ovaries ensured amenorrhœa, as cases showing the contrary had been published. The explanation given that these were incomplete removals was not easy to refute. As to the argument that shrinking of the ovaries at the menopause favoured this theory, the fact that this was only part of a general atrophy of pelvic organs—a condition accompanied by diminished blood supply—rather strengthened the circulatory theory advocated in the paper than otherwise.

Dr. BRAITHWAITE read a paper on a case of Adenoma of the Portio Vaginalis Uteri forming a Depressed Sore or Ulcer. He gave the clinical history of this case, the measures taken for its relief, the histology of the tissues removed, and the subsequent progress of the case to recovery. The paper was accompanied by drawings.—Dr. DAKIN thought that everyone would agree with Dr. Braithwaite that his case was of an adenomatous nature, but from the description of the clinical appearances, from the microscopic sections, and from the history and subsequent course of events it was difficult to see the distinction between the case in question and one of erosion of the cervix. The fact that there was a depression was possibly an accident and due to the erosion having appeared over an area already depressed, seeing that the woman had borne three children. The histological appearances were those of an erosion—namely, sections of numerous glands, like those of the cervix, and not showing any sign of commencing malignant action.—Dr. AMAND ROUTH alluded to the fact that a cervical adenoma was extremely prone to become malignant, and it was possible that this change had occurred in that portion of the adenoma where the ulceration had been seen, although the microscope did not prove it.—The PRESIDENT said that Dr. Braithwaite's case was a very unusual and

[1] Brit. Med. Jour., 1893.

an obscure one. Had it not been that the surface of the ulcer was depressed, he thought everyone would have considered it an ordinary erosion. The microscopic structure resembled that of an erosion; there was no infiltration, and there was no statement that the patient had wasted.

The following specimens were shown:—

Dr. CRAWFORD: Fibroma of Ovary.

Dr. HORROCKS: Fibroma of Ovary (2), and Fibroid of Uterus

Dr. BLACKER: Uterus with Placenta Prævia Marginalis.

Mr. BLAND SUTTON: Tubal Gestation, with Effusion of Blood between Amnion and Chorion.

Mr. MALCOLM: Uterine Fibroids removed for Pyrexia after Miscarriage.

LIFE ASSURANCE MEDICAL OFFICERS' ASSOCIATION.

The Relation of Slight Degrees of Albuminuria to Life Assurance.

A MEETING of this society was held on May 31st, 1894, Dr. J. E. POLLOCK, President, being in the chair.

Dr. POORE opened a discussion on the above subject in an address, which we print in full in this number.—Dr. SYMES THOMPSON referred to Sir George Johnson's views in regard to the significance of albuminuria—namely, that albuminuria was always pathological. Great as was his respect for his old teacher and colleague, he was inclined to traverse these views. His own practice was, if he found no albumen after a second or third examination at due intervals, to recommend acceptance sometimes even at ordinary rates.—Dr. THEODORE WILLIAMS said the tests he had always found most satisfactory were boiling and the addition of nitric acid, and the cold nitric acid test. Picric acid, he felt sure, proved too much, and he had discontinued its use entirely after a short trial of it. He thought it important to test the urine as soon as the patient passed it and allow time for the albumen to come down. With regard to the question of following up cases in which albuminuria existed, Dr. Williams had done so in a number of cases—all well-known members of society—and most of them had died even earlier than he had expected. Dr. Williams said he never accepted urine which was brought to him. It was his invariable rule to have the urine passed in his presence in the case of men. Often there was a difficulty about it, but he insisted on the proposer attending again if unable to pass any urine on the first occasion. He had no trouble in obtaining a specimen of the urine in the case of women, and it was easy to satisfy oneself that the urine had been actually passed by them. On the whole, Dr. Williams was inclined to agree with Sir George Johnson's views and to act with great caution as regarded the acceptance of cases of albuminuria.—Dr. CROSBY said there could be no question that albuminuria sometimes was temporary. He referred to the experience of Dr. Dukes at Rugby. His own experience as medical officer to a large banking institution in the City, where for many years past all the clerks were examined as to their educational fitness before they were sent for examination as to their health fitness, was that it was no uncommon thing to find albumen in youths varying from fifteen to eighteen years of age. This almost invariably disappeared after a few days' rest at home under the observation of their medical attendants. He attributed the cause to the mental strain of the entrance examination. In these cases the amount of albumen was an appreciable one, and the urine by no means of low specific gravity. He was quite convinced that the presence of albumen in the urine did not in all cases indicate kidney affection, and that it might be urethral, as in chronic gleet, or vesical, as in catarrh with commencing ropy mucus. His rule of practice was—if albumen was present after one, two, or three weekly examinations—to defer the case for three months for re-examination, and, if on later occasions albumen was still present in appreciable quantity, to reject the case.—Dr. DOUGLAS POWELL said he thought a boy who got albuminuria under extra strain must be below the average as regarded constitution. He would in such cases be inclined to postpone longer than a week. Where albumen had once been found he was not satisfied with the casual examination of the urine at the insurance office in the middle of the day. Frequently it was of low specific gravity at that time. He thought in such a case it was important to have the morning and evening urine examined, and this would best be done by the medical attendant. His experience was that albumen was not infrequently found in the morning when absent in the evening. Another matter he considered very important, and that was the age at which albuminuria occurred. Any case occurring before fifty he would almost invariably reject. In later life it was a different matter. Over sixty a certain amount of albumen was not infrequent in people who went on living a considerable time. Such cases could be dealt with more lightly. Where there was a history of possible calculus at past times albuminuria had a less serious significance. In such a case there was considerable probability that only one part of the kidney was damaged and the rest healthy. Dr. HERON spoke of the value of albuminuria from the outcome of experience in the observation of families conducted to ascertain whether it was permanent or not. When transient he regarded it as not of material importance; when permanent, as rendering the patient not insurable. Transient albuminuria might arise from various causes. He instanced a case of irritability of the bladder with frequent micturition, in which the urine contained a trace of albumen. Examination of the bladder revealed nothing. The patient, however, had had a fall a week previously, and that had perhaps something to do with it. Within a month there was no albumen, and the patient had remained for seven years perfectly healthy. In the case of a lady albuminuria commenced at the age of eighteen and was a sequel to scarlet fever. She had continued to have albumen in the urine, though a mere trace, for twenty-two years, but she had enjoyed good health and had been the mother of a family. Another case was that of a distinguished medical man who had had albuminuria regularly since he was comparatively young. He was a very fairly healthy man, and had attained to a considerably advanced age. The only rule that could safely guide our decision on this question, until we knew very much more than we did about it, was, irrespectively of the person's age, to examine and re-examine the urine in which we found albumen, to decide whether the deposit was a permanent or a temporary feature of the case, and in the former event to reject it as unfitted for life assurance.—Dr. HOAR, referring to the matter of temporary albuminuria, related a striking case in point.—Dr. HINGSTON FOX said that some years ago he had tabulated for the Hunterian Society eighty-six cases of albuminuria observed by him in life assurance examinations. The majority of these were of slight character—mere cloudiness on boiling—but some involved as much as 10 per cent. estimated by Esbach's tube. He had found that most of the instances could be assigned to one of three categories: (1) cases of loaded concentrated urine (sp. gr. 1020 to 1040), generally depositing oxalate or uric acid crystals; (2) cases of cyclic (Pavy) or so-called functional albuminuria, where the urine was free, or nearly free, from albumen on rising in the morning, but was markedly albuminous during the earlier part of the working day, showing again little or none in the evening—these were young subjects, with excitable hearts and varying blood tension; and (3) cases of temporary or accidental albuminuria from dietetic causes, headache, strain of muscular exercise, &c., also from admixture of vesical or urethral albumen, and in women from leucorrhœa. He had seen several cases due, he was confident, to the presence of a slight gleety discharge. Albuminuria cases required careful study; they could not be disposed of in a few minutes in the office, in the way much of their work had to be done, but, if they were to be accepted on any terms, must be seen deliberately on two or more occasions, the nature of the albumen, if possible, determined (he had found paraglobulin in some of his cases), microscopic examination made, and, above all, such an acquaintance obtained with a man's personal history and condition as would justify their confidence in his general soundness.—Dr. LESLIE OGILVIE referred to a case of transient albuminuria where the life was ultimately accepted, and the proposer was now alive and well.—Dr. HECTOR MACKENZIE said he had recently had a case referred to him which illustrated what Dr. Poore had said as to the importance of having the urine passed in the presence of the medical examiner. It was that of a middle-aged man, in which the medical report was perfectly satisfactory. The only doubt was raised by the proposer's statement that two years previously he had been declined by another office. On reference to the papers of the latter office it was found that the proposer had been found to have albumen in the urine on examination on three separate occasions at considerable intervals. The medical examiner was then communicated with and asked to re-examine the urine. This was done, and the proposer was found to have albumen. The medical man said that on

the previous occasion the urine had not been passed in his presence, but had been sent to him. Had it not been for the previous rejection the life would have been accepted at ordinary rates.—The PRESIDENT, after complimenting Dr. Poore on the practical and interesting paper with which he had opened the discussion, said it could only be decided by examination at long intervals whether albuminuria was temporary or not. Temporary albuminuria might arise from a variety of causes. Among these were acute affections—such as fevers, pneumonia, &c—pregnancy, and exposure to cold after scarlet fever. What tests could be applied as to permanency? We must spread the examination over months. The use of the microscope was important to determine whether the kidney was diseased. If casts were present we should summarily reject the case. There were cases of albuminuria so temporary that insurance offices should not reject. He would agree with Dr. Powell that probably the boys in whom albuminuria occurred were not fine specimens. He would depend on prolonged examination and the use of the microscope to decide the nature of these cases. Should a case be rejected in which albuminuria had occurred for some years while the general health remained good? He thought it might be accepted with a heavy addition.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.—Separate Acromion Process simulating Fracture.—Syringomyelia in a Child.—Displacement of the Semilunar Cartilages of the Knee.

A MEETING of this society was held on Wednesday, June 6th, Dr. CLOUSTON, President, being in the chair.

Dr. JAMES CARMICHAEL showed a case of Exudative Purulent Pleuritis in a child a few months old successfully treated by aspiration.—Dr. NORMAN WALKER showed two cases of Rodent Cancer of the Face which had been treated by excision and skin grafting.—Mr. A. G. MILLER showed a case of Excision of Wrist by Watson's Method.—Dr. LOGAN TURNER showed two cases of Displaced Internal Semilunar Cartilage which had been treated by operation. In the first case the cartilage was stitched in position with catgut sutures, and in the second it was entirely removed. Both patients had subsequently suffered no further inconvenience.—Dr. EDWARD CARMICHAEL showed a pathological specimen from a case of Aneurysm of the Aorta, with Rupture into the Right Ventricle.—Dr. T. BURN-MURDOCH communicated a note on a case of Hairy Tongue, or Hyperkeratosis of the Filiform Papillæ.—Dr. W. F. ROBERTSON showed microscopic specimens from the same case.

Professor STRUTHERS read a paper on Separate Acromion Process simulating Fracture. He maintained that the condition was a much more common one than was generally believed, and that its existence frequently led to errors of diagnosis in injuries about the shoulder-joint.—Dr. RONALDSON said he had seen two cases, in father and child, of separate acromion process on both sides. He believed that when it was congenital it would always be found on both sides.

Dr. ALEXANDER BRUCE gave a lantern demonstration of Sections from the Spinal Cord of a case of Syringomyelia in a child. On making sections of the cord at the necropsy the nervous matter was found to be reduced throughout its whole length to a thin white sheath, and the interior was filled with an almost clear gelatinous-looking substance. Sections prepared by the Weigert-Pal methods showed a large tumour area in the centre with numerous hæmorrhages into its substance. The new formation was of the nature of a glioma. It showed an exceedingly cellular tissue with fine processes from the cells. The vessels, which were very numerous, showed an appearance which had been described before in the disease—namely, a thickened hyaline condition of their outer sheaths.—Dr. BYROM BRAMWELL showed with the lantern some preparations from a case of the same kind.

Dr. LOGAN TURNER read a paper on Displacement of the Semilunar Cartilages of the Knee, which was illustrated by a lantern demonstration. He minutely described the anatomical structure and relations of the semilunar cartilages and the changes which take place in their position in the various movements at the knee-joint. He then gave an account of a large number of cases of displaced cartilage successfully treated in Professor Annandale's wards by stitching or removal.—Mr. JOSEPH BELL congratulated Dr. Turner upon the admirable paper which he had given them. He wished, however, to insert one *caveat*. The operation described was not entirely devoid of danger, and he did not want every practitioner to think that it was necessary to open every knee-joint that had a loose body in it without counting the cost.—Professor ANNANDALE said that Dr. Turner's paper had been a great encouragement to him to offer clinical material to his younger friends, because they had an example of how such material might be worked out. He agreed with Mr. Bell in the word of caution which he had given. There must be some risk in the operation. He had, however, only recommended it in cases in which all other methods of treatment had failed, and in which the condition was really giving rise to such trouble that it made the patient's life a worry or prevented a working man from carrying on his occupation. No form of apparatus would relieve the symptoms produced by a loose internal semilunar cartilage which was displaced inwards. The only real treatment in such a case was operation. In a certain number of cases there was a difficulty in making an exact diagnosis. There were many conditions which simulated displaced internal semilunar cartilage, such as growths from the synovial membrane, tumours, and curious collections of fat in the joint. In such cases it was sometimes absolutely necessary to cut into the joint in order to find out what was really wrong.—Sir WILLIAM TURNER said that he had been particularly impressed with the admirable way in which the lantern served for the purposes of anatomical demonstration, not merely for bringing out microscopic appearances, but for displaying the larger and coarser relations of structure.—Mr. J. M. COTTERILL agreed with Dr. Turner that in most cases removal of the displaced cartilage was more satisfactory than stitching, because the after-treatment was less tedious and the result was more certain.—Dr. LOGAN TURNER replied.

WIGAN MEDICAL SOCIETY.

A MEETING of this society was held on June 7th, the President, Mr. E. H MONKS, jun., being in the chair.

A paper was read by Dr. W. Permewan on a Method of Treatment of Asthma and Respiratory Diseases, in which he alluded to the nasal organs as an important factor in respiration and the large percentage in which they are affected in asthma and respiratory diseases. The paper, which was an able one, was attentively listened to, and a discussion followed in which Mr. Barnish, Dr. R P. White, Mr. Jones, Dr. Rees, Mr. Lowe, Dr. Benson, and the President took part. A hearty vote of thanks was accorded to Dr. Permewan, who replied.

Notes of a case of Typhus Fever with complications were read by Mr. T. M. ANGIOR, in which he alluded to the difficulty sometimes experienced in arriving at a correct diagnosis in cases of typhus fever.—A discussion followed, in which Mr. Barnish, Mr. Parker, Dr. Benson, Mr. Brady, and the President took part.—Mr. ANGIOR replied.

The SECRETARY then read circulars from (1) Dr. Rentoul of Liverpool; (2) Dr. Barr, secretary of the Lancashire and Cheshire Branch of the British Medical Association; and (3) the Protest Committee of the Lancashire and Cheshire Branch. After discussion the following resolution was passed with only two dissentients, who considered that the society should not pass any resolution before a Midwives Bill was before the country. The resolution was as follows: "That this meeting of the Wigan Medical Society, recognising the existence of midwives, whose services it would be difficult to dispense with, is of opinion that their training should be improved and their practice should be under medical control."

THE ROYAL INSTITUTION.—The Rev. W. H. Dallinger, Sc.D., LL.D., in his final lecture on the microscope as an instrument of scientific research, delivered at the Royal Institution on Tuesday last, dwelt on the advantages of the apochromatic objective and compensative eye pieces. With the highest microscopic facilities available in 1875, Dr. Dallinger discovered the flagellum of bacterium termo, the minutest of microbes, but with modern improvements it was possible to detect a filament of pure silica even more attenuated. The lecturer's remarks were illustrated by means of the oxy-hydrogen lantern, and a series of slides were exhibited illustrating the life history of some of the more important putrefactive microbes.

Reviews and Notices of Books.

Materials for the Study of Variation, treated with especial regard to Discontinuity in the Origin of Species. By WILLIAM BATESON, F.R.S., M.A., Fellow of St John's College, Cambridge. Pp. 598. London: Macmillan and Co. 1894.

IN the second chapter of the "Origin of Species" Darwin remarked that before applying the principles in regard to selection which he laid down it was necessary to discuss whether organic beings in a state of nature are subject to any variation, and he continues, "that to treat this subject at all properly a long catalogue of dry facts ought to be given," which he reserved for a future work. We all know how he redeemed this promise in his "Forms of Flowers" and his later well-known volumes, and how many interesting examples he collected from his own observation and from the writings of others. In the important treatise before us Mr. Bateson has continued this line of inquiry, regarding it as the first duty of the naturalist that he should collect and codify the facts of variation, and he very justly observes that the comparatively small number of such facts that have been collected to support the mountains of theory that have been raised upon them may be attributed "in great measure to the unfortunate circumstance that natural history has come to be used as a vehicle for elementary education, a purpose to which it is unsuited." In order that such education may be given to large classes, facts have to be organised, scheduled, and reduced to diagram and system. "By this method the pupil learns to think out schemes of nature sufficient, turning for inspiration to books, and supposing that by following his primers he may master it all," whilst he rarely learns the habit of spontaneous observation; and this system, Mr. Bateson thinks, reacts on the teacher, inducing him to forget that "the caricature of nature shown to his pupils is like no real thing," and he instances the frequency with which variations occur and are yet wholly unheeded by student and teacher alike, in creatures so commonly submitted to dissection as the crayfish and the cockroach. There are mighty difficulties in explaining or accounting for the present condition of the world of life. Apart from the mystery of the origin of life on the earth, driving men to suggest the possibility of its introduction from another sphere in meteorites, forgetful that the same difficulty in regard to its origin still confronts us, it is a problem of extreme obscurity why nearly allied species should retain their characters.

In spite of all that has been written, no genuine instance of a change of specific form, a conversion of one species into another, has ever been observed. All our artificial varieties left to themselves speedily revert to the ancestral type. The slight deviations that commonly occur in nature are non-persistent, and in the historical period neither man nor animals seem to have undergone any marked change. The lapse of age is commonly demanded for the production of one species from another, during which various concomitant circumstances—as isolation, sexual selection, utility, special conditions of soil and climate—are acting, but there is no proof forthcoming that any amount of adaptation to surrounding circumstances has effected a change of species, or has developed a new species from a pre-existing form. As Mr. Bateson remarks: "Many suggestions have been made as to the benefits which edible moths may derive from their protective colouration, and as to the reasons why unpalatable butterflies in general are brightly coloured, but as to the particular benefit which one dull moth enjoys as the result of his own particular pattern of dulness as compared with the closely similar pattern of the next species, no suggestion is made."

The foundations on which the theory of evolution may be said to rest, and which show broadly that life has been continuous on the earth, are the facts derived from the study of organic remains in the various geological strata and the facts derived from the study of embryology. Both are found to lend support to the theory, though there are many gaps in both. But if we are to accept the doctrine that life has been continuous, that variations occur which, according as they are or are not beneficial to the individual, lead to the production of new forms through infinite modifications by natural selection or to the degradation and extinction of the race, it is clear that the facts proving the existence of variation, the extent to which it may occur, the value of the particular variation, and the causes which occasion it, are of fundamental value. To this subject Mr. Bateson devotes the present work, and first considers the phenomena of symmetry and repetition of parts, by which means patterns of various form are produced, which, he observes, constitutes one of the most general characteristics of living things, but which is at the same time exceedingly difficult to explain: "If anyone will take into his hand some complex piece of living structure—a passion flower, a peacock's feather, a cockle-shell, or the like—and will ask himself how it has come to be so, the part of the answer that he will find it hardest to give is that which relates to the perfection of the pattern." He proposes the term "merism" to denote the phenomenon of repetition of parts, and the term "meristic variation" to indicate departures from the usual type in such cases. He gives instances of discontinuous meristic variation in the sudden occurrence of supernumerary wings in lepidoptera, though these are rare and have not been very carefully examined; in the appearance of four joints instead of the normal five joints; in the tarsus of Blatta; in the repetition of horns in sheep, goats, and deer; and in the appearance of hermaphrodite and gynandromorphic animals, the latter being animals in which the characters of the whole or part of one side of the body, wings, and antennæ are male, while those of the other side are female. In plants similar examples of meristic variation are found in the division in the tulip of the floral organs into four parts instead of three; of a narcissus into seven parts instead of six. Such forms of meristic variation he classifies into examples in linear series, in radial series, in bilateral series, and in secondary symmetry and duplicity, giving many instances of each.

Mr. Bateson has ransacked the archives and proceedings of societies, both native and foreign, and collected quite an extraordinary number of cases of meristic variation in the number of vertebræ and ribs and spinal nerves; in the segmentation of numerous arthropoda; in the number and disposition of mammæ and of teeth; in the eyes and wings of insects; in colour markings and in many minor symmetries, as those of the digits; in mammals, shown in cases of polydactyly, oligodactyly, and syndactyly occurring in man, monkeys, in the horse, cat, pig, and other animals. The general result of his inquiry is to show that the transition from one form to another is by no means in all instances gradual, imperceptible, or, as he terms it, "continuous," but that, on the contrary, it is frequently sudden and considerable, or, to use his phraseology, discontinuous; and he considers that it is an error both far reaching and mischievous to assume that a new variation must immediately be swamped. The causes of variation we are not as yet in a position to explain.

St. Thomas's Hospital Reports. New Series. Vol. XXI. Edited by T. D. ACLAND, M.D., and BERNARD PITTS, F.R.C.S. London: J. and A. Churchill.

WE consider that the plan followed by the editors of the series of reports issuing from this hospital and from St. Bartholomew's Hospital is the one which should in many respects form a model for hospital reports. The present volume is divided into two parts; the first contains

contributions from members of the staff or old students, the second part the statistical reports of the hospital. Amongst the contributions to the first part is one—In Memoriam *F.* Le Gros Clark, F.R.C.S., F.R.S.—by Mr. Wagstaffe, a graceful contribution from the pen of one of his old pupils to the memory of a former surgeon of the hospital and a former President of the Royal College of Surgeons of England, a man of high character and strong personality. The late Dr. Hadden contributed a Clinical Study of Infantile Hemiplegia with Acute Onset. Dr. H. P. Hawkins writes on the Pathology of Perityphlitis. Dr. Hector Mackenzie gives a further carefully considered contribution on Diphtheritic Paralysis and the Nervous Symptoms and Sequelæ of Diphtheria. The late Dr. T. Cranstoun Charles contributed a paper on Intermittent Albuminuria. Dr. C. S. Sherrington, F.R.S., contributes a short note on the Knee-jerk. Dr. R. Percy Smith of the Bethlem Royal Hospital contributes a paper on Sulphonal and Hæmatoporphyrinuria; Dr. C. J. Cullingworth writes on Effusions of Blood into the Fallopian Tube: a contribution to the Study of their Etiology, based on seventeen cases verified by operation; Dr. F. Foord Caiger has a paper on the Complications of Scarlet Fever, with special reference to factors concerned in their incidence; Mr. A. F. Stanley Kent deals with the Relation of Function to Structure in the Mammalian Heart; Mr. H. Milton of the Kasr-el-Aini Hospital, Cairo, publishes Sixty-two Cases of Vesical Calculus treated by Lithotrity; and Mr. E. C. Stabb, the resident assistant surgeon, relates the history of Eight Cases of Abdominal Surgery, an extremely interesting series. Mr. Edmunds and Mr. Bidwell write on Abscess of the Liver, and the former suggests a new method of evacuating the pus. A case of Successful Removal of a Pancreatic Cyst is recorded by Dr. Sharkey and Mr. Clutton. Mr. Makins and Mr. Abbott write on the Treatment of Aneurysms of the Lower Extremities, their paper being based on a consideration of 57 cases under care in St. Thomas's Hospital; of these, 46 were cured, 2 relieved, 4 died, and 5 refused treatment. Mr. Bernard Pitts gives the History of Transfusion, with short notes of cases in which the method of infusion of saline fluid into the veins has been adopted. Mr. F. G. Parsons concludes this part of the volume with a contribution to Craniology. In the second part Dr. Hector Mackenzie is responsible for the medical report, Mr. E. C. Stabb for the surgical report, Dr. R. Cory for the report of the midwifery department, Dr. Cullingworth for the report of the in-patient department for diseases of women, Mr. C. H. Usher for the statistical report of the ophthalmic department, Messrs. A. H. Woodcock and G. W. H. Bird for the report of the department for diseases of the skin, and Mr. R. Lake for the report of the aural department. These various statistical reports, especially the medical and surgical ones, involve much labour, but are, as usual, very satisfactory and enable anyone to see at once the result of treatment of any disease or injury about which he may be anxious to obtain information. The autotype portrait of the late Mr. Le Gros Clark, which acts as a frontispiece, is an excellent likeness and well executed; the illustrations to the papers are well done, the chromographs appended to Dr. Cullingworth's paper being especially worthy of mention.

Die Behandlung der Leukæmie: Kritische Studie. Von Dr. H. VEHSEMEYER, Arzt in Berlin. (*The Treatment of Leukæmia: a Critical Study.* By Dr. H. VEHSEMEYER.) Berlin: S. Karger. London: Williams and Norgate. 1894.

THIS critical study of the treatment of leukæmia is an example of a useful class of literature. Any disease which baffles medical skill must periodically be re-studied, and healing efforts up to date futile or partially successful must be reviewed with care before fresh efforts can be expected to yield additional light upon its nature and successful treatment. Appended to Dr. Vehsemeyer's *brochure* there is a very complete bibliography of the subject, while the text contains a careful study of the most important points in those works bearing upon his subject. In gauging the influence of a particular agent in any disease it is naturally of the first importance to have a clear idea of the disease under treatment. The leukæmic state is one associated with so many conditions that its improvement in some instances while a particular drug is being administered does not necessarily imply a like amelioration when the causes of the leukæmic conditions are somewhat different. The disease the author treats of is that better known in this country as leucocythæmia in association with splenic enlargement, and he mentions as the only successful case on record one published by Martyn, in which ammonia appears to have had a decidedly curative influence. Encouraged by Martyn's success, however, the author proceeded to use that agent in the case of a rachitic infant, with the effect of producing emesis—not cure. The child had the large spleen sometimes seen in such cases, glandular enlargement, and an increase of white cells in the blood. It improved under dietetic treatment, and ultimately died in a convulsion—a termination of the rachitic state too familiar to the physician. We have mentioned these two cases to emphasise the fact that in the treatment of leukæmia we must ever bear in mind that we are dealing with a symptom, not with a disease *per se*, and that in judging of the result of therapeutic efforts we must have data associating the blood state with some anterior condition before we can exalt one method of treatment at the expense of another. In writing this we are glad to find ourselves in agreement with the author, whose studies have led him to the conclusion that from a pathogenetic point of view leukæmia is not to be regarded as a primary disease of the spleen, but that that organ is secondarily affected like the lymphatic glands and other structures. He consequently considers that splenectomy is contraindicated in these cases. We can commend Dr. Vehsemeyer's pamphlet as being an honest attempt to throw light upon a subject of which we still know very little.

The Etiology of Osseous Deformities of the Head, Face, Jaws, and Teeth. By EUGENE TALBOT, Professor of Dental Surgery at Chicago. Chicago: The W. T. Keene Company. 1894.

THIS is an elaborate and ingenious work, profusely illustrated, and is full of information of a very interesting nature. It commences with a historical sketch of theories regarding irregularities of the maxillæ and teeth, and the causation of such conditions as supernumerary teeth, want of proportion between jaws and teeth, and the like. Then follows a consideration of the conditions of the cranium, vault, jaws, and teeth, in a large number of somewhat diverse conditions. The various forms of crime are fully considered, as are also neuroses, genius, idiocy, intemperance, and maternal impressions.

The chapters on neuroses of development of the jaws, palates, vault, and teeth are very full and interesting, especially to dentists. The causes of local irregularities of the teeth are dealt with later. So varied and diverse are the subjects and considerations found in this work, and so numerous are the theories brought forward to explain them, that a review can give but a poor idea of the scope of the work, which must be read to be appreciated. An extraordinary amount of patient labour must have been expended in its compilation, for the theories of all writers on different subjects of deformities of the jaws and teeth are brought forward. A large number of the explanations offered are original, and, though it would be easy here and there to point out examples of somewhat speculative theorising, still it must be remembered that the nature of the subject permits of this,

and the ingenuity of the author heightens the interest of the reader without sensibly weakening the utility of the book. We recommend a perusal of this work by scientific dentists, and by those interested in developmental pathology and the relations of deformities of the cranium, jaws, and teeth to insanity and crime.

Year-book of Pharmacy and Transactions of the British Pharmaceutical Conference. London: J. & A. Churchill. 1893.

THIS volume consists of two distinct parts, each of which possesses considerable interest. The earlier portion, the "Year-book," comprises valuable abstracts of papers on Pharmacy, Materia Medica, and Chemistry, contributed to British and foreign journals from July 1st, 1892, to June 30th, 1893. The labour of condensing these papers has been performed with customary care, and, as full references to the originals are given, this volume affords a convenient index to the work of the year. The alkaloids of aconite and hyoscyamus and the glucosides of digitalis have led to a vast amount of patient research in numerous quarters. Details are given of a new and simple method for the purification of chloroform, while the products formed during the spontaneous decomposition of chloroform have been reinvestigated. The value of Ehrlich's sulphanilic test has been assailed. It is, however, impossible in the brief space of a review to indicate the variety of work summarised in this volume, it must suffice to indicate that it ranges from the more recent polysyllabic additions to the list of drugs to the decomposition of potassium chlorate by heat in presence of manganese dioxide.

Turning to the work of the Conference, it is a pleasure to peruse once more the address of the President, Mr. Octavius Corder, with its interesting account of Gerard's "Herbal" and its appreciative references to so many of the herbaceous plants. The twenty papers read at the Conference are given in full, together with the discussions which ensued, and they afford evidence of the attention devoted to improvements in pharmacy and to recent therapeutic research. The vexed question of the standardisation of the alkaloidal tinctures of the British Pharmacopœia produced a scholarly paper, which, however, provoked but little discussion. Mr. Edmund White was more successful in raising comment with his paper on the Pharmacy of the Thyroid Gland. Other papers deserving mention are those by Mr. E. M. Holmes and by Mr. F. C. J. Bird upon the Ipecacuanhas of English Commerce and upon Deëmetinised Ipecacuanha respectively. The general impression, however, derived from this account of the Conference is that the serious business scarcely formed the chief attraction to Nottingham in the middle of August.

Les Excentriques: Étude Psychologique et Anecdotique. Par M. LE DR. MOREAU DE TOURS. Paris: Société d'Éditions Scientifiques. Pp. 120. 1894.

IN this *brochure* Dr. Moreau de Tours discusses the very numerous cases of persons who, without being really mad, perform all sorts of extravagant actions, very often due simply to a spirit of emulation or of imitation or of a desire to become notorious. Thus a whim takes some absurd and idle fellow that he will walk from the confines of Russia to St. Petersburg, and occupies a year and seventeen days in accomplishing his self-imposed task. Forthwith another man rides 6000 miles in 200 days. Then, as in the year 1889, an epidemic of these follies breaks out. Three Austrians wheel a wheelbarrow before them from Vienna to Paris and do the distance in thirty days. Soon afterwards Madame Ara proceeds to ride from Koursk to St. Petersburg, a distance of more than 600 miles. Miss Bly, an American lady not out of her teens, undertakes a voyage round the world in seventy-seven days, with the knowledge only of her mother tongue. In the very same month a correspondent of an American daily paper started at two hours' notice to beat Miss Bly and did so by an hour; and on the same day the correspondent of another paper started for the same journey at fifteen minutes' notice. Miss Bly went round the world in seventy-two days, but a Mr. Train accomplished the feat in sixty days. In July, 1890, Mr. Marcus Meyer won a bet with ease that he would reach Paris from San Francisco in fifteen days. In 1891 Zoe Gayton walked from San Francisco to New York, a distance of 3395 miles, in 213 days. Miss Ackerman was still more energetic, and with the view of spreading total abstinence principles went on horseback, on mules, on camel, elephant, and buffalo, in diligence, palanquin, and wheelbarrow, 160,000 kilometres, visited 500 large towns, presided over 1417 meetings, received 4000 and despatched 6000 letters, wrote 700 articles for journals, and fulfilled other engagements. To think, says Dr. Moreau de Tours, that women have time to marry and bear children.

My Water Cure. By SEBASTIAN KNEIPP, Parish Priest of Wörishofen, Bavaria. Translated by A. DE F. London: William Blackwood and Sons. 1893.

WE can hardly be expected to criticise a work of this kind seriously. The worthy parish priest, who has acquired quite a fame in Bavaria, admits us into his arcana and presents us with the system which he regards as so much superior to authorised medical science. The free use of water internally and externally, the simplest clothing and diet, ample physical exercise in the fresh air, and the use of various herbal remedies, seem to be his chief points. That by such means considerable results may be attained we are quite prepared to admit, but we fail to detect any real originality in views that where true are not new, and where new are not true. Simple habits and strict attention to food, clothing, and exercise are the commonplaces of hygiene, but the difficulty of the regular medical practitioner is the impossibility of persuading most patients to practise at home methods and rules which they will adopt readily enough in a remote Bavarian village where the glamour of novelty and romance invests them. *Omne ignotum pro magnifico* still holds good. Simple rules (all-important though they may be to many patients) are too readily slighted when they come in the way of ordinary medical advice, but they acquire a mysterious solemnity when announced by a much-advertised priest who attributes his knowledge to occult powers. Pfarrer Kneipp's knowledge of pathology may be conjectured from a passage like the following: "Headaches which proceed from watery matter or conglutination in the head, or from ascending gases, stomach pressure, slight conglutination of chest and lungs, may all be speedily cured by hypercon (hypericum) tea." Such a passage seems to transport us into the pre-scientific era. The author regards his dietetic and hydropathic system not only as a sovereign remedy for a host of minor ills, but as efficacious for typhus fever, scarlet fever, and for the early stages of phthisis and cancer. Comment is superfluous. While setting our faces against quackery and the indiscriminate recommendation of remedies without regard to states of disease, we must not ignore the great results which diet, excercise, and baths may often achieve. Regular medicine must not leave the most thorough regulation of these in the hands of conscious or unconscious charlatans.

LIBRARY TABLE.

Handbook for Norway; with Some Account of the Route viâ the Gotha Canal to Stockholm and the Route viâ Sweden to St. Petersburg. By E. J. GOODMAN. With Fifty-seven Illustrations and Route Map. Hull: Thomas Wilson, Sons, and Co. 1894.—The author of "The Best Tour in Norway"—

the practical and pleasantly written book we recommended to our readers just a twelvemonth ago—has returned to his theme and given us a "Handbook" for the same country still more practical in its aim and not less pleasant in its style. The volume before us is designed for such persons as are entire strangers to Norway, or at least to the remotest parts of it, and who want advice as to the best routes open to them. With this object it is arranged in a series of separate tours, the first of which is the most important, though the others are by no means lacking in interest for the nature-student, the artist, or the holiday-seeker pure and simple. Mr. Goodman, who is familiar with all these routes and in sympathy with each type of tourist just indicated, will be found an effective guide in every respect, chiefly in economising time and expense, while omitting nothing that ensures the enjoyment of whatever can attract and reward a visit. It is an "itinerary" in the true sense, in which brief and pointed directions for getting to this place or to that are admirably supplemented by vivid pictorial representations of the scenery, public monuments, and other objects of interest. The next meeting of the "International Congress of Medicine and Surgery," which will probably be held at St. Petersburg three years hence, will doubtless tempt not a few of the profession to try the Norway route to that rendezvous; and to such travellers Mr. Goodman's volume will prove valuable, not only for the economy of time and money it will effect, but for the facilities it offers of appreciating the climatic and hygienic advantages which make Norway so attractive as a health resort.

We have received the first number of the new series of the *Pall Mall Budget*. If prophecy may be ventured on the basis of the specimen number, the design is to be modern, smart, and amusing rather than solid or informatory, and we have no doubt that the editor knows the public for whom he is catering, and that the people who will find the present series very grateful and comforting reading will probably be numerous. The articles most likely to be read are a droll interview with Mr. Rudyard Kipling adorned with a not too flattering portrait of the author, and the first instalment of the same gentleman's jungle rhapsody. The illustrations are good. The two caricatures by "Max" have wit if they have not charity; the fairest portrait in the Grafton Gallery is but moderately reproduced; Mr. Dudley Hardy's frontispiece is more restrained, and therefore pleasing, than work in that vein is wont to be.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held on Thursday, June 7th, Mr. George Pollock, President, in the chair. There was a full attendance. The minutes of the last meeting having been read and confirmed, letters of regret at inability to attend were read from some of the members of the committee. The report of the subcommittee appointed to draw up a statement concerning the organisation of the Association was presented and read by the hon. secretary. It comprised a recapitulation of the original articles of the Association founded on four resolutions passed at a general meeting of Fellows and Members of the College in March, 1884, the revised rules of the Association, a statement of the position of the Association in relation to the Members' question, and some suggestions with the object of improving the organisation of the Association. The bulk of the report was drawn up in the form of a letter addressed to the Provincial Fellow referred to in the minutes of the last meeting. The following are the rules of the Association as they now stand:—

1. The objects of the Association shall be to consider all matters relating to the constitution, government, and administration of the College of Surgeons of England, and to promote generally the interests of the Fellows.

2. The executive of the Association shall consist of a president, two vice-presidents, treasurer, committee of not less than twenty, and one honorary secretary, who shall severally be called the Committee of Management, and any five of whom shall form a quorum. Any member who shall not attend at least one meeting during the year shall *ipso facto* cease to be a member of the committee, but shall be eligible for re-election.

3. The officers of the Association shall be elected at the annual general meeting, one-sixth part of the committee to retire annually, but to be eligible for re-election. It shall be in the power of any member at the general meeting to substitute another name in place of anyone proposed by the committee, and the name so proposed shall be duly balloted for.

4. The annual subscription of the Association shall be 2*s.* 6*d.*

5. A statement of accounts duly audited shall be presented at the annual general meeting.

6. The annual general meeting, which shall be duly advertised, shall be held in the last week in May or within six weeks thereof.

7. A general meeting of the Association may at any time be summoned by the committee or by a requisition addressed to the secretary, and signed by at least ten members of the Association, the object of the meeting being stated in the requisition.

8. No alteration shall be made in any of the rules of the Association without the consent of a majority of those present at a general meeting called to consider the same, of which fourteen days' notice at least shall be given.

The committee instructed the secretary to have the rules printed and sent to each member of the Association, and a suggestion of the subcommittee with regard to the annual subscription that a proposition should be made at the next annual meeting that any elected member might commute the subscription for a sum of ten shillings, was approved.

The remaining portion of the report included a resolution which the subcommittee recommended for submission to the meeting of the Fellows on July 5th. The resolution ran as follows:—"That in the opinion of this meeting the concessions granted by the Council, and such other changes as the body of Fellows may desire, shall be embodied in a new charter."

The report of the subcommittee was unanimously approved and adopted.

The honorary secretary reported that he had communicated with several members of the committee with reference to their reappointment, and, with one exception, all had expressed their desire to be renominated. Among them were several distinguished provincial Fellows.

The honorary secretary was instructed to issue the customary notices for a committee meeting on the 18th and for the general meeting on the 19th. This concluded the business of the meeting, and the committee adjourned.

FOREIGN UNIVERSITY INTELLIGENCE.—*Budapest:* Dr. Felix Szontagh has been recognised as *privat-docent* in Children's Diseases, and Dr. Balázs Kenyeres as *privat-docent* in Forensic Medicine.—*Clausenburg:* The chairs of Ophthalmology, Dermatology, and Forensic Medicine are vacant and open for competition.—*Cracow:* The Austrian Government have proposed in the Budget to obtain funds for the Obstetric and Gynæcological Clinic and for the erection of an Institute of Pathological Anatomy.—*Gratz:* An Institute of Forensic Medicine and an Obstetric Clinic are to be established.—*Innsbrück:* The Government propose to establish a Pathological Institute.—*Lemburg:* A new Anatomical Museum is to be built.—*Prague:* Funds are to be provided by the Government for the teaching of Forensic Medicine in the German University, and for the Surgical Clinic of the Bohemian University.—*Strasburg:* Dr. Otto W. Madelung, Professor of Surgery in the University of Rostock, has accepted the chair of Surgery, in succession to Professor A. Lücke.—*Vienna:* A dental department is to be added to the Policlinic, and Dr. R. von Metnitz is to have charge of it. It will not be opened until October. In the University improvements are to be made in the Obstetric Clinics and in the Bacteriological Department. The total funds proposed by Government in the Budget for the expenses of the various Austrian universities amount to more than 3,000,000 florins.

THE LANCET.

LONDON: SATURDAY, JUNE 16, 1894.

ALL parties that are concerned in the passing of a Midwives Bill may for the present relax their vigilance. He must be a very inexperienced observer of public and political affairs who does not see that a Midwives Bill is about the last thing that any party in the State is at present thinking about. We only revert to the subject inasmuch as it is brought to our notice in several different ways. Firstly, in connexion with a meeting of the Lancashire and Cheshire Branch of the British Medical Association and a report adopted by it, and a pamphlet by Dr. CARTER of Liverpool amplifying a speech he made at this meeting of the branch against the views of Dr. RENTOUL and of the report adopted; also a protest against the report, numerously signed by members of the Lancashire and Cheshire Branch; secondly, in connexion with the proceedings of the General Medical Council; thirdly, in connexion with the recent meeting of the General Practitioners' Association; and, fourthly, in connexion with a suggested scheme for the registration of midwives which has been drawn up by the executive committee of the Midwives' Registration Association, and which has been approved by the association. The discussion of this subject in so many different quarters and from so many points of view must do good and conduce to its ultimate settlement on grounds of common sense and humanity.

Let us recall the chief facts connected with each of those meetings. At the meeting of the Lancashire and Cheshire Branch of the British Medical Association a resolution was carried objecting to legislation "*ostensibly* for the purpose of promoting the registration of midwives, but in reality for the creation of an Independent Order of Midwifery Practitioners," and setting forth that such legislation would (*a*) endanger the lives of pregnant women and infants; (*b*) interfere with the training of medical students in midwifery practice; (*c*) repeal the educational sections of the Act of 1886; and (*d*) prevent newly qualified practitioners from perfecting their knowledge of obstetrics and diseases of infants. Dr. CARTER strongly opposed the resolution in a powerful speech, but it was carried by a majority of 87 to 71. Dr. CARTER complains that the majority was increased by not a few voting who were not members of the Association. At the General Medical Council the subject was broached in two or three of its aspects. First, in the form of communications transmitted by the Home Secretary. In one of these a letter from the coroner of Bridgwater was enclosed, with a rider by the jury in the case of a woman dying in childbirth "most strongly censuring the woman for not calling in medical assistance, and expressing an opinion that the legislature should interfere to prevent women acting as midwives unless trained and certificated for such purposes." Other communications were the resolution of the Lancashire and Cheshire Branch above described, and a petition from Dr. RENTOUL, from the Preston Medico-Ethical Society, and from the Lancashire and Cheshire Branch against the so-called registration of midwives. The General Practitioners' Association in their report congratulated themselves on their efforts in postponing the Midwives Bill; but the retiring President, Dr. ALDERSON, significantly said in his speech: "The Association recognises, I feel sure, the need of wise legislation to supervise and prevent the irresponsible practice of the great number of ignorant and untaught midwives, so pregnant for evil and the origin of so much misery and suffering, as well as not infrequently of maternal and infantile death." Finally, we have before us the suggested scheme of the Midwives' Registration Association, of which we give an abstract elsewhere.

There is, we must all see, room for further precautions so as to make sure that in the attempt to abolish midwifery by untrained, ignorant, and often dirty and intemperate women, an unneeded class of low medical practitioners is not introduced. We think this is the real danger, and a veritable one, but we think it is more likely to result from the views of Dr. RENTOUL than from those of the promoters of midwives' registration. If midwives are to have a smattering of surgery and of medicine to meet the principle established by the Act of 1886 for medical practitioners, a formidable class would be brought into competition with medical practitioners, and endanger all the efforts of the General Medical Council to elevate the profession. There is, indeed, no demand and no need for such a class, which would be a deadly blow at the medical profession as at present educated and examined. It is not conceivable that the present scandals of ignorant and untrained midwives will be allowed to continue. Dr. RENTOUL and his co-petitioners say that the poor are already amply supplied by means of the Poor Law and by practitioners who accept small confinement fees varying from 10*s.* upwards. But they do not take into account the thousands who are not paupers, and who pay a few shillings to a midwife. In this class of cases the mortality is great and has always excited the pity of the medical profession. Dr. CARTER, in his able pamphlet, quotes the report of the medical officer of health of the Glamorgan County Council and says: "In one small district of that county there were in four years and two months no fewer than sixty-seven cases of puerperal fever, of which twenty-six were fatal. Nearly all the confinements in this and similar districts are attended by midwives—professed midwives as they are called, but not trained and with no certificate, and whose knowledge of infection and antiseptics is nil." The profession feels that such a state of matters is disgraceful and must be mended. It can be mended without the introduction of a new race of female medical practitioners. And it will be a new fact in history if the medical profession does not guide the State in devising a remedy. It is quite possible—it is quite easy—to provide a class of women to do safely the work that women do now, and that medical men will never do, and yet to secure through parish councils and other authorities that every parturient patient so attended shall have in reserve the help of a fully qualified medical practitioner; and, as we read the signs of the times, there is a practical recognition of this by all responsible and reflecting men.

THE hygienic value of sunlight and sun-heat is one of the commonplaces of practical medicine. We know as a matter

of daily and convincing experience that sunshine is an indispensable condition of health, and that its influence upon disease is potent and far-reaching. The individual deprived of a fair allowance of sunshine becomes anæmic and debilitated, perhaps rickety or phthisical. In wasting diseases, impaired convalescence, and the like, the sun's rays, as we all know, are among the most important of remedies, and the "sun-bath" will sometimes succeed in cases where the Pharmacopœia fails. Certain as are these practical inductions from everyday experience, it is satisfactory to have them put upon a sound scientific basis. Hence the facts contained in Dr. PERCY FRANKLAND'S paper in a recent number of the *Nineteenth Century* are not less important than interesting. The writer points out that bacteria become causes of disease when removed from their natural functions —such as breaking up refuse organic matter, fertilising the soil, or producing alcohol—and that they are difficult of control from two causes—viz., their extreme minuteness and their extraordinary power of rapid reproduction. A single bacillus is capable, under certain conditions, of bringing forth a progeny four times as numerous as the population of London in so short a period as twenty-four hours. Hence arises the very important question, How can these potentially noxious creatures be controlled? Experiments show that sunshine is by far the most important of all agents in preventing the development of bacteria and in depriving them of their lethal properties. DOWNES and BLUNT showed years ago that if certain liquids capable of "going bad" were exposed to the direct rays of the sun they remained perfectly sweet, whilst exactly similar liquids kept in the dark became tainted and exhibited innumerable bacteria under the microscope. More recently, M. MOMONT of the Institut Pasteur has shown that the oxygen of the air has a marked effect in assisting the sun's work. The bacilli of anthrax exposed to the sun's rays in the presence of air were found to perish in two and a half hours, while similar bacilli placed in a vacuum were still alive after fifty hours' exposure to sunshine. It has, further, been found that the rays which exert this destructive effect upon bacteria are those which also exert the most powerful action on the ordinary photographic plate—viz, the ultra-violet rays, and the adjoining rays in the spectrum.

Further experiments establish the interesting fact that an amount of exposure to sunshine which is insufficient to destroy certain bacteria may profoundly modify their character and even deprive them of their disease-producing powers. Dr. PALERMO of Naples, experimenting with KOCH'S cholera bacillus, found that if these bacilli were protected from sunshine they killed guinea-pigs in eighteen hours, while after being "sunned" for three or four hours they were harmless, the animals experiencing no ill-effects when inoculated with them. The same experiments found that guinea-pigs inoculated with these "sunned" bacilli had acquired immunity from the disease and could swallow active cholerаic bacilli without contracting cholera. Dr. FRANKLAND'S own experiments show that in the case of bacteria suspended in water the lethal effects of the sun's rays are capable of modification by the addition of various ingredients to the fluid. Thus he finds that the addition of common salt greatly increases the destructive action of sunshine on anthrax spores suspended in water, whilst the addition of a similar proportion of Glauber's salt has no effect whatever. Dr. FRANKLAND has found that the number of bacteria in the water supplied for drinking purposes to London is often twenty times as great in the winter as during the summer months, and, while admitting the probability that other factors come into play, he thinks this contrast may be in part explained as the consequence of the varying amount of sunshine at the different seasons. Experiments by Dr. PROCACCI of Naples tend to show that this bactericidal action of sunshine is incapable of penetrating to any considerable depth below the surface and probably ends at a depth of twenty inches of water.

The above conclusions, which are, we think, inherently probable and fall easily into line with all our recent knowledge, suggest many important practical conclusions. They emphasise the imperative necessity of abundant light and sunshine in all hospitals, convalescent homes, and sanatoria. They explain and help to enforce many valuable therapeutic rules, such as the large part played by exercise, sunshine, and fresh air in the treatment of phthisis, struma, anæmia, and many other diseased conditions. It would seem that in many morbid states sunshine does not simply act by "improving tone" or "heightening vitality," as we in our ignorance have often, for want of a better theory, been inclined to say, but really by striking at the root of disease in so far as it either destroys the germs that cause the disease or at least robs them of their morbific influence. Incidentally these experiments throw light on some popular ideas—e.g., the general belief in the superior wholesomeness of running water.

Professor MARSHALL WARD has recently dealt with the same subject in a communication to the Royal Institution. He points out that it has long been well known that the different rays of the solar spectrum act differently on plants. "The highly refrangible rays in the blue-violet region of the spectrum have a powerful effect on the processes of growth proper in a plant and in heliotropic curvatures of the growing parts, whereas the process of carbon-dioxide assimilation is chiefly dependent on the less refrangible red-orange rays at the other end of the spectrum. Again, the infra-red rays, if only in virtue of their thermic effects, are known to be of importance in growth, though in quite a different way from the rays above mentioned." He confirms the statement that the number of bacteria in river water is decidedly less in the summer than in the winter months, contrary though this view is to many preconceived opinions. He proves conclusively that the effects of sunshine upon bacteria are not a question of temperature, but are the results of the light rays. He concludes that "there is evidence to show that the slow and continued action of even comparatively low intensities of light so act on these bacteria that even when they are not killed, but only partially injured, by the inimical rays their behaviour is so altered that the resulting growths are perceptibly different from those of the same organisms not exposed to light, that their powers of fermenting organic substances are interfered with, and that various profound morphological and physiological changes are induced in them."

IT is proverbial that anything under the sun may be proved by a judicious manipulation of figures, and without a doubt the utility of numerical argument is freely invoked

in medical matters. Whenever a new drug is introduced to notice the announcement is almost sure to contain reference to the great number of cases in which it has been successfully tried, and the probabilities are largely in favour of an assertion that in all these cases no single bad symptom has resulted from its employment. Subsequent observations by others, who are less interested in proving the efficacy, seldom fail to show, not only that the drug is not all-powerful, but also that some of its influences may be distinctly harmful. It is, however, always difficult to prove a negative, and while doubters continue to investigate and hesitate to publish negative statements the original assertion is commonly pushed prominently into notice and is met with in various forms, until it almost persuades many who have but few opportunities of testing the value of the statistics. A specific for whooping-cough, for sea sickness, for chorea, for diphtheria, for pneumonia, or for almost any other disease is nearly certain to be thus supported by a large array of figures, and the point of interest lies in the method by which these figures are reached. Can it be seriously supposed that the practice of any single individual will yield such figures? With the utmost desire to try a new remedy for any particular disease, the number of opportunities remains relatively few even in times of epidemics, and, except perhaps in the case of influenza, they can surely never be numbered by the hundred. And yet we read of two or three hundred cases of diphtheria or of whooping-cough as though such numbers were quite trivial so far as practice is concerned, and quite essential when it is necessary to demonstrate the value of a new remedy. If the statistics plainly confessed that they were *percentages* the matter would be easy to follow, since it is obviously mere child's play to convert experience, however limited, into the percentage form; but this is so simple that it would clearly fail to convince, and an appearance of greater scientific precision is lent by a large but uneven number. Members of the medical profession are frequently charged with scientific scepticism, but it is difficult to understand how any other attitude is possible towards the therapeutic statistics which so frequently reach us from abroad. In another column reference is made to the value of a new antidote for prussic acid. Of its absolute value we need say nothing here, since no case has come within our observation since the report has been received. It may be an antidote or it may not; but the point we would dwell upon is an assertion that by one individual it has already been used with success in forty persons who had been accidentally poisoned with prussic acid. How many practitioners can say they have seen a single case of poisoning with prussic acid, accidental or otherwise? How many can say they have been called to treat such a case? The drug is so poisonous that treatment is usually wholly impossible. What satisfactory explanation can possibly be suggested for such an extensive experience? In this particular instance the drug named as the antidote is so well known that all notions of proprietary rights are impossible, and the question of the figures remains an absolute mystery. In some of the instances mentioned, especially when dealing with new drugs, statistics may of course have a commercial value; but in many cases this argument fails. The fact remains, however, that, as at present offered for acceptance, in therapeutic matters the argument from statistics fails to carry conviction. In legal matters the principle of *caveat emptor* holds good, which we may freely render "let the purchaser take care of himself." In dealing with new remedies, in spite of the most laudatory statements, especially if backed by an array of figures, the same principle holds. He who recklessly uses new remedies certainly needs the caution to take care of himself as well as of his patients. In therapeutics, even more than in commercial matters, the argument from statistics is only too apt to be misleading.

SINCE the days when it was first sought to control the ravages of small-pox by means of inoculation, and subsequently of vaccination, no greater interest has attached to the question of inhibitive inoculations than that which has been aroused in India and elsewhere by the proposal to protect communities against cholera by some such preventive method. A brief account of M. HAFFKINE'S process of anti-cholera inoculations, as practised in India, has appeared in the public press; but as we are able to refer to the actual text of Dr. SIMPSON'S report to the municipality of Calcutta on the subject we are in a position to set out more definitely than has yet been done what is the actual stage which has been reached in these experiments.

Since M. HAFFKINE arrived in British India he has inoculated not less than 25,000 people with the preparation which he alleges and believes to be preventive of cholera. Having succeeded in engrafting the cholera bacillus on animals, and in subsequently cultivating it indefinitely on them, he secures that which he calls—or rather, we think, miscalls—a "vaccine." He then prepares two "vaccines," one mild and the other strong; and he inoculates the human subject first with the mild vaccine, which produces some pain, discomfort, and fever for about a day; and then, after a lapse of about five days, a second inoculation with the stronger preparation is given, the immediate consequences being much the same as when the mild vaccine was used. But, in the absence of the means of differentiating somewhat accurately between the effect of prevailing cholera on those who had submitted to the preventive inoculation and on those who had not, the mere number of M. HAFFKINE'S inoculations carried but little weight. When, however the cholera season of 1894 began in Calcutta, M. HAFFKINE, with the aid of Dr. SIMPSON, was enabled to make some experiments which, to say the least, are of distinct interest and importance. He was able, in localities where cholera was actively prevailing, to induce some of the inhabitants to submit to his inoculations and to watch the result both on them and on a number of other persons living under the same circumstances, but who for one reason or another had not been subjected to the inhibitive inoculations.

The results were watched with care by Dr. SIMPSON, on behalf of the municipality, and in his recent report to that body he gives some instances which appear striking. The following is one of these: "In MUNGLOO JEMADAR'S house a fatal case of cholera occurred on March 29th. On the 31st eleven members of the family, out of a total

of eighteen, were inoculated. It so happened that cholera, again breaking out in the house and attacking four persons, of whom three died, selected four of the seven not inoculated, while the eleven inoculated remained perfectly free." Other examples of the same sort are given, and, though the numbers included in each example are small, yet it is noteworthy that, whereas in each of them cholera did attack one or more of those who had not been inoculated, it failed to attack any one of the inoculated. Such an experience is unquestionably of interest when it concerns a community such as that of Calcutta, where cholera is not only endemic, but where it also appears periodically in epidemic form. And hence Dr. SIMPSON urges upon his municipality that they should for a while secure the services of M. HAFFKINE in order that he may continue his experiments.

Dr. SIMPSON wisely urges caution in arriving at any hasty conclusion. He properly refers, of course, to the very limited means as yet available for the formation of any final opinion, and he adds that tests such as those he records would have to be made "over and over again" before any ultimate conclusion could be arrived at. We may, therefore, trust to him for the caution needed in this respect. But another caution is also needed. Dr. KLEIN, repeating M. HAFFKINE'S earlier experiments, has found that whilst intra-peritoneal injection of the bacillus of cholera in non-fatal doses did in the case of guinea-pigs confer an immunity against what would otherwise have been fatal doses of the same bacillus, yet the same immunity against the cholera bacillus was produced by the injection of a number of other and even of non-pathogenic bacilli, such as bacillus coli. And he drew the inference that whilst it was quite possible that all these different species were alike as regards their intracellular poison, yet this poison and any protection, whether evanescent or permanent, given against it must be distinguished from those poisonous substances which are elaborated by one or other of these species in nutritive media, including the medium of the human body. Having regard to these considerations, we trust that the greatest practical accuracy of observation will be observed in the experiments which can hardly fail to follow the appeal which has been made to the municipality of Calcutta by their able and untiring health officer, and under such circumstances the continuance and perfecting of the experimental measures adopted give promise of results which, in one or other way, will have interest for all scientific men, and especially for those who are concerned with the health and well-being of the populations of India. But we cannot conclude these remarks without expressing one further hope—namely, that no inoculation experiments will be allowed to stand in the way of the active pursuit of those measures of sanitation by means of which alone Calcutta and other towns, whether in India or elsewhere, can ever be freed from the scourge of cholera.

ON Monday, the 11th inst., the Duke of Westminster opened the new Public Baths at Woolwich. The baths, which have cost over £25,000 in their construction, will be highly appreciated by the numerous artisans employed in the Royal Arsenal.

Annotations.

"Ne quid nimis."

OUR PRINCES AND OUR HOSPITALS.

OPPORTUNELY delivered, seeing that Hospital Sunday intervened, were the happy speeches of his Royal Highness the Duke of Connaught at St. Thomas's Hospital on Saturday and of his Royal Highness the Prince of Wales at the Poplar Hospital for Accidents on Monday last. The first was in support primarily of the new medical school buildings of St. Thomas's Hospital so much needed to complete its equipment as one of the greatest of our metropolitan schools of medicine and built on the responsibility of the medical staff. But, though this was the primary object of the Duke of Connaught's speech, occasion was taken to urge a still greater cause—viz., the restoration to the use of the poor of those wards which for years have been alienated from them on grounds of impecuniosity and some of which have been devoted to the use of those who can pay. The treasurer estimated that if £60,000 could be provided this restoration might forthwith be made with the effect of increasing the annual reception of in-patients by 2000. The Prince heartily pleaded this great cause. The wards are there, and the beds, but the poor are not there. They are, so to speak, kept out of their own beds by those who can afford—in some degree at least—to help themselves. When it is remembered that Guy's and St. Thomas's Hospitals have to minister to a population of nearly a million persons we can only wonder, depressed agriculture notwithstanding, that they are allowed to be starved in their power of receiving the poor. The experience through which the governors of St. Thomas's Hospital have passed in the last quarter of a century, with increased rates and diminished income, has made them not only sadder but wiser men. It has taught them the necessity of economy and of selecting their patients, especially their out-patients. But the great wants of the hospital are patent, and we trust that this princely and effective appeal will be generously responded to by rich men, for there are few hospitals which are more finely situated, or which, by their contributions to the art and science of medicine, as well as by the eminence and usefulness of their teaching staff, have done more to deserve public and professional support. Passing on to Monday's proceedings at the Poplar Hospital, we yield ourselves to the strong human feeling excited by the pleadings of the Prince of Wales. We venture to say with regard to the Prince of Wales that for hard work in the cause of the poor, for keen insight into the spots where pinching poverty tells in acutest misery, and for noble words of sympathy and appeal he is not exceeded by any public man. He was as much at home at the Poplar Hospital for Accidents—of which his son, the Duke of York, is president—as he is at Marlborough House. Stopping on his way to inaugurate the new Home for Missions to Seamen, fraught with many hospitalities for our sailors, whose hard fate it often is to find the land more disastrous than the sea, he reached the Poplar Hospital fitly accompanied by her Royal Highness the Princess of Wales, whose gracious presence at beneficent functions again is noticed with universal joy, and put into a short speech all that shows the solidarity of our civilisation and induces rich men and working men to pull together in the same boat for each other's comfort and welfare. Drawing on his great experience as one connected with Commissions for the Better Housing of the Poor, he showed how impossible it was that their present dwellings could afford accommodation for cases of grave sickness. A reader seems, in perusing the Prince's speech, to see

the sick man or the sick child sighing for the larger space and the deeper quiet of a hospital ward, and with equal vividness to realise the tragedy of an accident that disables a breadwinner who leaves his home well and hearty in the morning and before night is an inmate of the Poplar Hospital, with possibly a compound fracture of the leg. In the course of his speech the Prince touched very felicitously upon the liberality of those who had freed them from the shadow of debt—not only rich men, but the working men, whose delegates his quick eye noticed before him, and whose contributions had gone to make that noble pile of £30,000 that had been raised in four years. Finally, forgetting nothing, he wound up with a fitting tribute to Dr. Corner and Mr. Brownfield, whose labours, without fee or reward, had extended over forty years. It is occasions like these that show the deep roots of our system of voluntary hospitals, and, we may add, of our loyalty. By all means let every abuse of hospitals be corrected; but let the charity which sustains them be fed more and more—as veritable homes for those whose homes are no homes for purposes of accident and grave disease; and let Princes and people combine, as at Poplar, to bless such admirable institutions.

THE CAUSE OF DEATH.

WE have on many occasions drawn attention in these columns to the necessity of a post-mortem examination in every case where there is reasonable doubt as to the cause of death, and the more so where the uncertainty might leave a suspicion of blame upon some person. An inquest recently held by the Derby borough coroner gives point to our contention. A lad ten years of age died after five days of severe abdominal pain and vomiting. These symptoms were associated with obstinate constipation. Shortly before his illness he had whilst playing fallen into a brook, and it was assumed that possibly he had swallowed some water, which might have been contaminated with chemicals derived from some neighbouring works. Before a medical man was called in a powder obtained from a druggist was administered to the lad. On the first day of the inquest, Mr. Borough, who attended the lad, testified that, in his opinion, the cause of death was acute gastritis, and that it might have arisen from some irritant poison contained in the water of the brook. We cannot too highly commend the action of the coroner in adjoining the inquest for a post-mortem examination. The necropsy revealed a twist of the bowel and the absence of gastritis. There seems to have been some doubt as to whether the mother of the boy informed Mr. Borough that there was no action of the bowels; at least, there was conflict of evidence on this point. There can be no doubt, however, that the symptom in question was present to the mind of the mother, and probably the fact was emphasised through the powder failing to cause the desired effect. When there are several circumstances, each of which might account for the illness, it is often difficult to make a definite diagnosis. Without suggesting that blame attached to anyone, we cannot help thinking that in the absence of any ascertained cause of the severe abdominal pain and sickness, it would have been well had the abdomen been opened, for, as the sequel showed, such a procedure would have led to a complete diagnosis, and at the same time might have been the means of saving the boy's life, which without it was pretty well certain to be lost.

STREET TRAFFIC AND ACCIDENTS.

STREET ACCIDENTS constitute a form of disorder which may almost be regarded as natural to the municipal constitution. Frequently trivial, it is not uncommonly fatal in its effects. As to its treatment, there is none so reliable as that of prevention, and this cannot be assured so long as the traffic of daily business is inextricably mingled, as it must be, with the ever circulating stream of active human life. Precaution, doubtless, can do much, and for this we must be thankful, however far its highest possible may fall below the level of perfect success. We have repeatedly directed attention to this subject, especially with reference to preventable causes of injury. The present time, just after the termination of a cab strike, affords a fresh opportunity for its discussion. It is much to be regretted that neither the law nor its officers, however they may censure, can entirely stop the practice of rapid driving. As little, apparently, can they regulate the pace of the reckless cyclist. Hooded vans are more amenable to regulation, and we may surely hope for a change in the construction of these, such that a driver will, at all events, be allowed a freer range of vision. At present he can see little more than the animal between the shafts. We may hope also that continued vigilance on the part of the police will go far to give more practical effect than we have yet known to all those civic regulations which make for security on the public way. The passenger on foot or otherwise, thus aided, will naturally travel more at ease in mind; but he must even then remember that, after all, the power of rules and of a competent executive is limited, and that it cannot realise that needful personal caution which is his truest safeguard against the ever-unexpected possibility of accident.

THE DIFFUSION OF SMALL-POX.

IN London last week there was further diminution of small-pox, the notified cases numbering 31; whilst the registered deaths were 3. There was also a fall in West Ham, the new cases being only 8, and the deaths 2. On Saturday there remained in the institutions of the Metropolitan Asylums Board 216 patients, and in Highgate Small-pox Hospital 11 patients under treatment. The fatal London cases were one each in St. Pancras, Newington, and Bethnal Green. In Shoreditch, after some discussion, it has been decided to post notices advising vaccination and revaccination. Much news concerning the prevalence of small-pox continues to arrive from the Midlands. At Darlaston the schools have had to be closed on account of measles and small-pox, but at Coseley the latter disease is fortunately decreasing. The prevailing conditions at Willenhall are deplorable, the local feeling running very high against the inaction of the sanitary authority; and now the medical officer of health, Mr. Hartill, has tendered his resignation in the midst of the epidemic. The temporary hospital was hoped to be ready this week; but the hold which small-pox has obtained on the district already makes it questionable how far the hospital will now be enabled to cope with the disease. Meanwhile a relief fund has been started, and some £200 have come in towards the maintenance of the chief sufferers, much destitution standing in need of assistance. As many as 13 cases of small-pox were reported last Saturday and 8 on Monday, whilst 5 deaths occurred in three days, making a total of 15 among the 300 cases which have arisen in the last three months. There were 5 cases in Wolverhampton last week; and Worcester, with 7 cases, Handsworth, Smethwick, and West Bromwich were each of them invaded. The disease continues to spread in Hinckley, though no deaths were recorded last week; but tents had to be ordered to provide for additional patients, as all the available accommodation in the hospital just completed is occupied. Great consternation has been created at Rawtenstall owing to the fact of a small-pox patient having been allowed to roam about the district in unrestricted intercourse with other people. The man seems to have been a destitute tailor, who, having developed small-pox in a "model" lodging-house, was turned adrift by the keeper after warning given to the relieving officer. Having been ejected from the

lodging-house, it appears that the man was refused admission to the workhouse, and later in the day was discovered drinking in a public-house. In the circumstances of a hospital having been provided by both the sanitary authority and the guardians the case is one demanding full investigation at the hands of the Local Government Board, and we are glad to find that an inspector is to make inquiry. There were 8 deaths at Birmingham last week, and 38 new attacks. Cases were also noted at Liverpool and Birkenhead. At Cardiff 3 cases are now under treatment, 2 having recently been imported on board a vessel from Havre—by no means the first instance of infection brought thence to our shores. There were 4 attacks at Bury, and 3 at Salford last week, and at Manchester 27 cases with 3 deaths. Dewsbury had 5 cases, and several other towns had slight invasions. In Scotland the epidemic at Leith continues, and a conference between the authority of that town and of Edinburgh has been held with reference to the adoption of concerted action for the repression of the epidemic, Leith having, we are glad to note, adopted the Notification Act. Means of vaccination and of revaccination have also been furnished, and it is thought that the disease may now be kept in check. Throughout, the malady has been mainly restricted to the poorer quarters of the town, and has been not a little spread by the medium of carelessness on the part of persons attacked in a mild manner. Power has been requested for ordering the disinfection of ships arriving from small-pox-infected ports. There are now 24 patients under treatment at Coatbridge. Dr. Littlejohn has sent a circular to every practitioner in Edinburgh, asking his coöperation in securing vaccination and revaccination as widely as possible. Dundee was last week invaded in the persons of three members of a family from Leith, and the patients have been isolated in the Barrack-square Hospital.

THE WATER OF THE LAKE OF GENEVA.

THE interest taken in this subject is not limited to Switzerland. Hardly a European nationality—to say nothing of the transatlantic English-speaking communities—but contributes to the residents, summer and winter, on the lake, for whom the potability of its water is of vital concern. Of the many Swiss hygienists who have considered the subject, the most recent is Dr. F. A. Forel, Professor of Anatomy and Physiology in the University of Lausanne. In an elaborate study submitted to the Société Vaudoise des Sciences Naturelles Professor Forel has confirmed in important particulars the findings of his predecessors, while adding much novel information as the result of his researches. Geneva water we know to be soft, and to possess mineral salts in a proportion entitling it to every hygienic use. As to the quantity of gas dissolved in it, we find from analyses made at Geneva and Ouchy that on the surface, at a temperature of 5° C., it is equal to: oxygen, 7·3 cubic centimetres the litre; nitrogen, 13·6 cubic centimetres; and carbonic acid, 0·6 cubic centimetre. Generally speaking, the water of the Lake of Geneva may be described as good, the surface water being, however, inferior to that of the depths. Analyses further made at Geneva show that of organic matter dissolved in the water the lake contains but one-fourth of the limit admitted by hygiene, that limit being fixed at 50 milligrammes the litre. As to microbes in the same water, Drs. Foll and Dunant in 1884 determined their number to be 36 microbes to the cubic centimetre. The spring water of Batiolettes, near Geneva, numbers 50 microbes to the cubic centimetre; the Arve 115 to the cubic centimetre; the best springs of Zurich 115, the worst 2730, microbes to the cubic centimetre. Professor Forel goes further into this question. To the objection that for a microbe to be dangerous it is enough that the water be impure, and that in the Lake of Geneva, which taps Savoy, Valais, Vaud, and Geneva, the contingency of impure water is more than probable, he replies by the three following propositions. 1. Microbes are lost in the eighty-nine milliards of cubic metres which make up the volume of the lake. 2. Microbes do not find the lake a medium favourable for multiplication; they require an appropriate temperature. The microbes which develop in the human body do so because its temperature (36·5°C.) is favourable to them; but the mean temperature of the lake, as we have seen, is 5° C., which compromises not only the multiplication but the very existence of microbes. 3. Microbes are destined to be consumed and destroyed sooner or later. They practically are so destroyed by all those tiny beings which constitute the *fauna pélagique* of the Lake of Geneva. As a matter of fact, the city of Geneva has, since 1880, been drinking the water of its lake without perceptible harm of any kind; there is no reason, therefore, why other riparian cities or health resorts (Lausanne, for instance) should not follow its example. Taken from an adequate depth and remote from the infall of refuse, the water, as Professor Forel's elaborate study has just shown, responds favourably to every hygienic test, contains a moderate and quite innocuous proportion of salts, abounds in gas, and is free from dangerous parasites.

A CASE OF DISPUTED MILK ANALYSIS.

THE case of Johnston *v.* Smith, which was heard recently before Mr. Justice Wills and a special jury, presents some points of interest. In it a dairyman at Woolwich brought an action against the public analyst of the district for what he regarded as negligently certifying that his milk had been adulterated with water. It appears that a sample of the plaintiff's milk was obtained by the inspector appointed for such purposes and submitted to the public analyst, who certified it to be adulterated with 20 per cent. added water. The plaintiff, on being summoned, disputed the accuracy of the analysis, and a portion of what was alleged to be the same sample of milk was forwarded to the authorities at Somerset House for analysis, the result being that the specimen was declared free from added water and the summons subsequently dismissed. The plaintiff, in support of his case, stated that his profits had fallen off £3 or £4 after the summons. Mr. Justice Wills, in summing up, said that evidently either the samples had got mixed up or there must have been an extraordinary blunder in making the analysis. The jury found a verdict for the defendant, and judgment was given accordingly.

EGYPTIAN ARCHÆOLOGY.

PROFESSOR CROOKSHANK, in the *East Grinstead Observer*, writes upon the "Recent Excavations and Discoveries in Egypt." Commencing with Sakkara, the great burial-ground of the old Egyptians, the tombs of which belong for the most part to the first of the Eleven Dynasties (B.C. 4400 to B.C. 2500), he proceeds to describe the finding of the jewels of the Kings of the XII. Dynasty in one of the pyramids of Dashour, a discovery which created the profoundest interest among Egyptologists a few months ago. Some of these jewels bear the names of Usertesen II. (B.C. 2366) and of Usertesen III. (B.C. 2333), and Professor Crookshank, who had several opportunities of examining them, says they are equal in workmanship to the best work of the jewellers in London or Paris at the present day, and "so marvellous is the finish of some of these objects, and so perfect the state of preservation, that one can hardly realise that they are not of quite recent manufacture. Particularly noteworthy is a pectoral made of gold and richly inlaid with cornelian, lapis lazuli, and turquoise. This beautiful work of art was undoubtedly made more than 4000 years ago, and we may well wonder how

many thousands of years the dwellers of the Nile had existed before they had reached this state of civilisation." After reviewing the prehistoric remains at Coptos—the terminus of the great trade route across the desert from the Red Sea to the Nile—Professor Crookshank gives an account of the excavations at Luxor. Within the past four years the work of clearing away the accumulated rubbish of centuries that surrounded the temple of Luxor has been actively carried on, and the magnificent colonnade and nearly the whole of the great court of Rameses are now completely exposed. The great statue of Seti II. (B.C. 1300), the Pharaoh of the Exodus, has been removed from Karnak to the Gizeh Museum. These relics of an ancient people are exceedingly interesting and important from many points of view, but as the writer points out, a collection of papyri, in an equally perfect state of preservation as the jewels already described, including the writings of historians, poets, and *savants* of the day, or copies of still earlier works, would have been of far greater value and interest than King Usertesen's ornaments or the jewelled crown of an Egyptian Queen. Egyptian archæology has two claims to interest medical men. First, there is the light which it has shed upon ancient medicine; secondly, there is the fact that the researches and their results have been due in a great measure to the industry of a distinguished member of our profession, who discovered the key to the hieroglyphical inscriptions of the ancient Egyptians. Until Dr. Thomas Young and Jean François Champollion interpreted for us the writing upon the famous "Rosetta" stone all attempts to decipher these ancient inscriptions had proved futile, and to these two belongs the honour of discovering their hidden meaning.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

REPORTS of sermons preached on behalf of the Hospital Sunday Fund indicate that the work of preparing a special supplement of THE LANCET for the purpose of bringing under the notice of the preachers some points worthy of attention has not been in vain. Many of the preachers gratefully acknowledged to their hearers the assistance they had received, and many more have notified similar acknowledgments to us privately. It is, of course, much too early to forecast the total collection which is likely to have been made. The returns will probably take some time in reaching the treasurer. St. Michael's, Chester-square (Canon Fleming) at present heads the list with an offertory of £1202 15*s*. Last year the offertory amounted to £1208 15*s*. 3*d*. The Dean of Worcester (Dr. Forrest) preached at St. Mary Abbott's, Kensington, in the morning and at St. Peter's, Eaton-square, in the evening. Archdeacon Farrar preached to a crowded congregation in St. Margaret's, Westminster, and the pulpit of Westminster Abbey was occupied by the Dean of Gloucester (Dr. Spence). In St. Paul's Cathedral Prebendary Reynolds preached the sermon at the morning service. A point of very great importance is that, by an arrangement of the Mansion House Committee, it has been possible for workers of all denominations this year to make the appeal to their congregations simultaneously. There are plenty of indications of special efforts having been made by many of the congregations, especially in the poorer districts. At St. Crispin's, Bermondsey, for example, a large number of small coins, amounting to £7, made up the largest collection yet sent by this poor congregation. The Bishop of London's letter, of which we caused 3000 copies to be circulated among the wealthier classes, no doubt acted as a refreshing stimulant both to preachers and to listeners. Indeed, the ministers have everywhere been most enthusiastic in their efforts to secure success. Most of them made preliminary announcements on the Sunday preceding the Hospital Collection with a view of inducing larger sums to flow into the exchequer of the Fund. On the other hand, we notice some falling off in unexpected quarters. Notwithstanding certain adverse circumstances, such as the general depression of trade, we hope that the united efforts of the supporters of the Hospital Sunday Fund will prevail, and that long-suffering and kind charity will send increased help to those who are working for the mitigation of pain and suffering.

THE QUARANTINE OF MADEIRA.

IN the island of Madeira the imposition of quarantine on the occurrence of any unwonted increase in disease has become so fixed a principle that the minds of some of the older residents are much affected by any apparent laxity of the authorities in carrying it into execution. This can be well seen by the letter signed "B. I. K." which recently appeared in *The Times*. His complaint is that "a new Governor has been appointed to give pratique to all vessels from Lisbon," and adds that "the people are trying their best to prevent this." The latter we can easily believe. The inhabitants of Madeira, islanders in a remote part of the world, have been educated in the belief that safety lies in quarantine rather than in sanitation. The true state of affairs in Lisbon regarding the recent outbreak will be found in our Cholera article on page 1524. It will take a long time, therefore, to convince "B. I. K.," "one of the oldest residents," that in 1856 cholera was in the island before the regiment from Lisbon, which is supposed to have brought the infection, arrived on the shores. The conditions of drainage, water-supply, and general cleanliness in Madeira were not at that time satisfactory. We refer "B. I. K.," in support of our correction of his ideas as to the adequacy of quarantine as a protection against cholera, to the accounts of the recent outbreak in Teneriffe, where last year the inhabitants had both cholera and quarantine.

THE GERVAS—TAYLOR WILL CASE IN DUBLIN.

THIS case has interest for the profession, inasmuch as it involved a question of the capacity of the testator, a gentleman aged eighty-two, at the time of making a codicil to his will in 1893, and still more so as it raised the question of undue influence against Dr. L. H. Ormsby, a much-respected member of the profession in Dublin. The alterations made by the codicil had the effect of changing some of the executors, revoking the names of two gentlemen and appointing Dr. Ormsby and Messrs. Gibney and Nevin. It also reduced the legacies to certain hospitals, and left to "his dear friend and confidential medical attendant, Surgeon Ormsby, a sum of £3000," &c. Dr. Ormsby was the medical adviser of the testator, and had been so for years. As the Attorney-General said, Dr. Ormsby had rendered the testator priceless service. He used to visit him sometimes five times a day. The testator said he owed his life to his surgeon. His solicitor said that he spoke with great clearness as to his wishes for the alterations of the will. In the course of the plaintiff's case the counsel for one of the defendants, Mr. Atkinson, Q.C., interrupted the cross-examination and said that the opposition to the proving of the will had been instituted by the defendants under an entire misapprehension and that he did not think it would be proper to continue it. He entirely withdrew the plea of incapacity on the part of the testator, and not only that of undue influence, but also all imputations on the character and professional honour of Dr. Ormsby. The judge, Mr. Justice Gibson, was equally explicit: "As far as he could see from the evidence, Mr. Atkinson was quite right in not proceeding with the defence. He did not see any evidence in favour of the plea of undue influence. The evidence of Mr. White and Chancellor Tisdall, apart from that of Mr. Bradley, appeared to be of the strongest character in favour of the testator's capacity." We need scarcely congratulate

Dr. Ormsby on a result which should have been anticipated by the defendants. As the Judge said, their case "crumbled away." It is to the honour of the profession that such questions are rarely raised and that when they are raised they so often collapse. It is nevertheless hard that a man of large property could not leave to his "dear friend and confidential adviser"—to whom he attributed the saving of his life—a few thousand pounds without his capacity to do so and the honour of his friend having to be vindicated in a court of law.

THE SCOTTISH LOCAL GOVERNMENT BILL.

THE important discussion in the Grand Committee on the Scotch Local Government Bill, it is to be hoped, has secured the principle that in the reconstituted Board a medical man is to find a place. We have sometimes had to differ from Sir George Trevelyan, but in this question he has shown sound judgment, and was admirably supported by Sir Charles Cameron, Dr. Farquharson, and others. We cannot imagine that the opponents of so wise an arrangement will again try their luck in the House; but too much vigilance cannot be displayed by the defenders of the measure, and we trust that Sir George Trevelyan will now adopt the plan as one to be fought for by the Government.

TESTIMONIAL TO THE MEDICAL OFFICER OF HEALTH OF MARYLEBONE.

IT gives us great pleasure to record that on Thursday, June 7th, Mr. Wynter Blyth, the medical officer of health of Marylebone, was presented by the sanitary authority of the district with an illuminated address as a slight recognition of the able and energetic manner in which he has coped with the prevalence of scarlet fever in his district. This graceful act on the part of the Marylebone sanitary authority will, we feel sure, be most acceptable to Mr. Wynter Blyth, and it evinces a cordial relationship between himself and his sanitary authority upon which both are to be congratulated. We wish we had more often to record these expressions of appreciation on the part of a sanitary authority of extra labours performed and anxieties gone through by their medical officer of health.

PLAGUE IN HONG-KONG.

THE telegrams concerning the plague in Hong-Kong continue to be of a most disquieting nature. The disorder is said to be "bubonical plague," but as yet little is known beyond the fact that a most serious epidemic has occurred. The accounts which have been received in recent times as to the outbreak of plague have been generally unreliable and incorrect alarms. Among an ignorant and superstitious population it is natural to attribute the sudden appearance of an epidemic and fatal disease to plague, but on investigation the epidemic has generally turned out to be typhus, relapsing, or possibly cerebro-spinal fever. It would seem, however, from the accounts that have reached this country, that the disease at the present time prevailing in China, which is attended with so much dread and alarm on account of the rapidity of its course and its great attendant mortality, bears a remarkable resemblance to the plague which, some 230 years ago, visited London, and of which Defoe has left us such a graphic account. The disease appears to have first broken out in Canton in April last, to have then spread to Hong-Kong, where the first cases occurred in the most crowded and dirty neighbourhoods, and afterwards to have diffused itself with great rapidity, the mortality having been alarmingly great. The disease is said to be sudden in its onset and attended with high fever, followed by swellings of the glands in the groin, axilla, neck, and other parts, and in many cases to prove fatal in from twenty-four to fifty-six hours, death being preceded by comatose symptoms. It is clear that the disease, whatever it is, profoundly affects the blood and the nervous and lymphatic systems. The epidemic was at first confined to the native and Mussulman population, causing a vast exodus from the affected places; but it is reported to have subsequently spread to the European population, and some of the soldiers in the garrison of Hong-Kong are stated to have been attacked.

THE LATE SIR ANDREW CLARK.

WE understand that, with the sanction and approval of Lady Clark, a biography of the late Sir Andrew Clark is in course of preparation, to which an introduction is promised by Mr. Gladstone. Those who may possess letters or other communications from the late President of the Royal College of Physicians of London will, we are desired to state, confer a great favour if they will lend the same with a view to publication. Documents should be sent to Lady Clark, Camfield, Essendon, Herts, who will arrange for their immediate return.

THE CONTAGIOUS DISEASES ACTS.

WE are not at all surprised to learn that the attention of the Indian Government has for some time past been drawn to the large and increasing amount of inefficiency caused by venereal diseases in the European army in India. The question is a very grave one from whatever standpoint it is regarded, nor are the evils, bad as they are in India, restricted to that country, for the health of our troops in this respect is seriously affected at camps and garrison towns at home and abroad. It must be always borne in mind that the effects of these diseases do not fall exclusively upon the individuals contracting them, but are often extended to other and innocent persons, and some of their remoter consequences are manifested in succeeding generations. So far as the Contagious Diseases Acts are concerned there cannot, moreover, be a doubt that they exercised a deterrent and restraining influence in regard to a number of thoughtless girls exposed to the temptations of urban life, and brought fallen women within the sphere of moral and remedial influences, to say nothing of the beneficial effect of the Acts on the outward aspect and decency of our streets.

LYNCH LAW IN AMERICA.

IT is notorious that free states and communities, especially if they be young also, notwithstanding the generosity of their political professions, have often been distinguished by acts of intolerance and oppression. We need not now recall the harsh rigour of puritan England, or the more inhuman cruelty which disgraced the first French Republic. Our own times can furnish examples enough. Where it could, the trade union has repeatedly proved itself an engine of merciless tyranny. The mob in every age has nursed within it the movements of brutal excess, and it would appear that the effects of these are seen to perfection even under the most liberally constituted systems. Take, for example, the instance lately recorded, in which a medical man practising in the American State of Virginia was stripped, tarred, feathered, and actually threatened with lynch law by a band of ruffians, because, forsooth, he had publicly protested against a shooting outrage. We are supposed to admit that this happened in a country under the control of legislation. Unfortunately the lynching system is there far too prevalent to allow of a belief so reassuring. If we look for its causes, where do we find them? In a distrust of law, because of its impotence to punish crime or its indulgence in dealing with it; in the consequent strength of passionate resentment centred in the individual who forthwith constitutes his own will the law. Clearly we have here an instance of freedom overgrown and run to seed, a

reversion to the social tyranny from which it originally burst in just rebellion. If opinion is not free, there can be no liberty. The practitioner alluded to is a British subject. Naturally he has appealed to the British Ambassador against his persecutors, and doubtless not in vain. It is to be hoped that the central American Government will take up the matter in all seriousness and will deal in an exemplary manner with the perpetrators of this cowardly outrage. To condone so deliberate an insult to its authority would constitute an admission of incapacity and a direct incitement to disorder.

THE TEACHING UNIVERSITY QUESTION IN LONDON.

A MEETING of delegates from the bodies in favour of urging on the Government the appointment of a Statutory Commission is being arranged for the 30th inst., whilst in opposition to its appointment a circular is being issued by a committee of graduates, of which Mr. Bompas, Q.C., is chairman. In this circular it is urged "that the duties of a local teaching university cannot be satisfactorily combined with the duties hitherto performed by the University of London." The opinions of Sir Gabriel Stokes, Dr. Welldon, and Sir William Thomson (Lord Kelvin), as members of the first commission, and of Bishop Barry and Professor Sidgwick are put forward in support of this conclusion.

SCARLET FEVER ON BOARD H.M.S. THUNDERER.

A SOMEWHAT extensive outbreak of scarlet fever has recently occurred among the crew of H.M.S. *Thunderer*, flagship of Vice-Admiral Sir Algernon Heneage, K.C.B., which arrived at Chatham Dockyard from Sheerness on Tuesday, June 5th. The outbreak in question seemed to have commenced at Sheerness, and energetic measures are now being taken both to check its spread and prevent its recurrence. The dockyard hands have been prohibited from working on board the infected vessel, and those members of the crew who appeared to be healthy have been transferred to H.M.S. *Hotspur*. According to the latest information which has reached us, nine patients, for the most part boys, have been sent to the isolation wards of the Royal Naval Hospital at Chatham, and some suspicious cases are being detained on board the *Thunderer*. The disease is of a mild type, and certainly the age distribution of the crew should render anything like a heavy mortality improbable. Unfortunately, the disinfection of a large vessel is far from an easy proceeding owing to the numerous dark and inaccessible corners &c.; and we have heard of instances in regard to other infectious diseases where a cabin, once infected, has acted as a source of mischief during several voyages.

SUICIDE OR ACCIDENT?

ON June 11th Mr. Troutbeck held an inquest at Horseferry-lane touching the death of Arthur Cawston, an architect, aged thirty-seven. From the evidence it appears that deceased was engaged in his office on June 9th. Shortly before the fatal occurrence he had asked for some oil, presumably for the purpose of cleaning a pistol. Shortly after the office lad had taken the oil to Mr. Cawston, he and a clerk were startled by a report of firearms. On rushing into the office they found the deceased gentleman insensible, with a pistol in his right hand, and with wounds on the nose. Death appears to have been instantaneous. The weapon with which the injuries were inflicted was an old-fashioned double-barrelled pistol, the triggers of which were made to project by raising the hammers. There was no guard to the triggers. The cartridges were of the old pin-fire type; altogether a most dangerous weapon, and one which from careless handling was well calculated to lead to an accident. The post-mortem was conducted by Mr. Smallpiece, the medical man called to deceased. He found two wounds on the nose, one on the bridge above the middle, and another lower down, slightly on the right side. The bullets from the two cartridges—which had evidently been discharged practically simultaneously, since only one report was heard—traversed the base of the skull, carrying away the greater part of the ethmoid and the anterior portion of the sphenoid, and after passing through the brain struck and fractured the posterior part of the skull. The forehead, eyelids, and face were blackened with unexploded powder grains. There was not the least singeing of the eyebrows or eyelashes. The skin over the first interphalangeal joint of the left fore-finger was scorched, showing that the muzzle of the pistol was held in the left hand. The wide scattering of the powder, taken in conjunction with the absence of singeing, proved that the explosion must have taken place several inches from the body. This fact, together with the apertures of entrance of the bullets being situated in the nose, pointed strongly to the view adopted by the jury that the death was accidental. The deceased gentleman was an architect of high repute. Amongst other works he had executed were the British Home for Incurables, St. Philip's Church, Stepney, and the Market Hall at Carlisle. He was in good circumstances, happy in his home relations, and apparently enjoying good health and spirits; indeed, the evidence showed an entire absence of motive likely to impel him to compass his own death.

THE HOSPITAL SUNDAY CONVERSAZIONE.

IN order, if possible, to assist in the work of bringing the needs of hospitals more markedly before the notice of the public, and of demonstrating the nature of the work in which they were engaged, the Lord Mayor and the Lady Mayoress gave a reception at the Mansion House on the 7th inst. A very large number, including many nurses engaged in hospital work, members of the staffs of the various hospitals, and many ministers of religion, accepted the invitation. A programme of vocal and instrumental music was provided. The more immediate cause of the concourse was the exhibition of "Living Pictures from the Hospitals," by Mr. H. C. Burdett. These were shown by means of magic lantern slides projected upon a large screen and illustrated hospital life in its various sections. The illustrations comprised the working of the out-patient department, life in the wards, the visiting day, the operation theatre, convalescent institutions, fever hospitals, and nurses and nursing. The Lord Mayor proposed a vote of thanks, which Sir Sidney Waterlow seconded. Sir Sidney Waterlow gave an account of the growth of the fund, which he said had now attained to a permanent position in London. It only required a better understanding on the part of the public of the admirable way in which hospital work was being improved to touch their hearts and to increase the amount now collected for the Fund.

THE SOLDIER'S VISION AND THE SOLDIER'S RIFLE.

WE recently called attention, in connexion with a published lecture by Surgeon-Captain H. R. Whitehead, F.R.C.S. Eng., the Assistant Professor of Military Surgery at Netley, to the influence of myopia on military service. This question of short-sight or defective vision in our soldiers is really one of great importance at the present time, seeing that they are armed with the Lee-Metford rifle, and it is admirably discussed in the paper referred to. The weapon in question is capable of sighting up to 1900 yards ordinary sights and 3500 yards with dial sights. To get the full value out of this rifle our soldiers should be emmetropic or brought to an analogous condition by correcting lenses, against the use of which there are, no doubt, decided

objections, especially in our army, although the use of spectacles is allowed in many Continental armies, and there is no prohibitive regulation against it as far as the officers of our own service are concerned. The soldier is only allowed the use of spectacles as a temporary aid in time of peace on one occasion—namely, on the rifle range during his musketry course. At the present time it is permissible to recruit men with slightly less than a quarter of normal acuteness of vision, although, fortunately, very few of our soldiers possess only just the minimum of acuteness of vision and the sight of our recruits is generally good. The test as it now stands allows 1·75 D of myopia. The conditions of lack of illumination that have to be encountered in the army, such as fog, mist, rain, smoke, and twilight, have also to be seriously considered as well as the effects of service in tropical countries on persons suffering from myopia. The question arises, of course, whether we can get the requisite number of recruits with normal vision; and if we cannot, but are driven to accept men with some amount of myopia, whether they should not be allowed to wear suitable lenses? The amount of myopia permissible in a recruit needs reconsideration. To get the full value out of the Lee-Metford rifle the soldier must, as we have said, possess, naturally or artificially, good vision.

THE ROYAL SOCIETY.

THE recent elections to the Royal Society, which were made at the annual meeting of the Fellows at Burlington House on Thursday, the 7th inst., include among a fairly representative list of eminent men the names of two members of the medical profession—Mr. Watson Cheyne and Dr. John Rose Bradford. The election of Mr. Watson Cheyne may be looked upon as yet one more tribute to the virtues of Listerian surgery, for it is as an exponent—practical, theoretical, and literary—of the doctrines of antiseptic surgery that Mr. Watson Cheyne has made his chief and very decided mark. Dr. Rose Bradford's election has also been eminently justified by his medical and physiological work in directions which are so well known that it is unnecessary to specify them, and we heartily congratulate both gentlemen upon having obtained the blue riband of science. The names of the other new Fellows of the Royal Society are as follows: William Bateson, George Albert Boulenger, Professor Hugh Longbourne Callendar, Robert Edmund Froude, Professor M. J. M. Hill, Professor John Viriamu Jones, Augustus Edward Hough Love, Richard Lydekker, Francis Cranmer Penrose, Dukinfield Henry Scott, the Reverend Frederick John Smith, Joseph Wilson Swan, and Victor Hubert Veley. Of these, the work of Mr. William Bateson has been especially in a direction that is always proving useful to physicians. A review of his latest book, "Materials for the Study of Variation," appears in our columns this week, and it will be seen that he has spared no pains to make exhaustive inquiry into a side of the Darwinian doctrines that must always be deeply suggestive and absorbingly interesting. Mr. Bateson is another addition to the rapidly increasing band of successful physiologists who have received their education in the science school of the University of Cambridge.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FOR the three vacancies which have arisen on the Council of the Royal College of Surgeons, England, the following five gentlemen have applied:—Mr. Reginald Harrison, Mr. Howard Marsh, Mr. J. N. C. Davies-Colley, Mr. Herbert W. Page, and Mr. James Hardie. Mr. A. T. Norton, whose probable candidature we announced last week, was too late in his application.

SCURRILITY.

IT is hardly worth while, perhaps, to notice the abusive language of Mr. Henry James Boyle Montgomery towards the medical service of the Royal Navy, because he has run so furiously amuck among all branches of the service from which he used to derive his position and pay, that the naval medical officers occupy no invidious position when they find themselves besmirched by him. "I should say," says Mr. Montgomery, in a work entitled "The British Navy in the Present Year of Grace," "the number of people on board ship who have been, and still are, either permanently injured for life or killed outright through the ignorance, incompetency, and carelessness of naval doctors is enormous." Mr. Montgomery's book appears to be full of similar chaste and restrained statements, for whose accuracy he was unable to produce any more reliable vouchers than hearsay, so that it is not surprising that when it fell into the hands of a competent critic it was severely dealt with. This Mr. Montgomery resented, and showed his feelings by bringing an action against the author of the criticism, the editor and proprietor of the journal wherein it appeared, and its printer and publisher. The illogicality of his view, however, that he might say what he liked about the British Navy generally, but that no one might say what they liked about him or his literary efforts, has received demonstration from Mr. Justice Hawkins and a jury. The jury stopped the case and found for the defendant, and Mr. Justice Hawkins, in giving judgment accordingly with costs, said that in his opinion the criticism of the book was moderate, for a more scurrilous production had never been brought to his knowledge.

TREATMENT OF THE MILK TEETH.

MR. EDMUND OWEN read a short but interesting paper on this subject at the last meeting of the Odontological Society. He asked the question whether it was always the best plan to stop decayed milk teeth, and whether it was really an advance in treatment. He thought that in some other branches of surgery many so-called improvements had in fact put back the dial of surgery and that dentists were carrying conservative treatment too far, hesitating to extract from fear that the due development of the jaws would be interfered with, or that the second teeth would have to scramble for position after premature loss of the temporary teeth; but in his opinion the development was due to the presence of the tooth sacs contained in the substance of the bone, and, with regard to the crowding, should it take place, it could be easily remedied by careful watching and weeding out if necessary. He said: "There is one point in connexion with the dental surgery of children's teeth which I am sure has not received the attention which it so urgently demands—it is that children's mouths should undergo regular periodical inspection." Mr. Owen laid especial stress upon the removal of carious teeth where there was enlargement of a lymphatic gland in the neck, which, he said, so many dentists refused to do, probably foreseeing some possible contingency in connexion with the eruption of the permanent teeth. Where the pulp of a tooth was exposed it was an extremely painful and difficult thing to do to clear out each fang thoroughly, and unless this were done it was merely "rolling a stone over a whited sepulchre," and further trouble was inevitable. The very germ with which the dental surgeon temporised in the alveolar region was often subsequently encountered in a submaxillary glandular abscess, but Mr. Owen thoroughly agreed with stopping milk teeth where the carious cavities were small or could be rendered absolutely aseptic, and in concluding he again urged the advisability of frequent inspection. The paper gave rise to a lively discussion.

WE learn with pleasure that it is proposed by the authorities of the University of Oxford to confer the honorary degree of D.C.L. upon Commendatore Rodolfo Lanciani at the next Encænia. Professor Lanciani, who is Professor of Roman Topography in the University of Rome, is one of the greatest archæological authorities and at the recent International Medical Congress made some highly interesting communications to our columns.

THE British Committee of the Eighth International Congress of Hygiene and Demography, which will meet at Budapest from Sept. 1st to 8th next, has now been constituted. Sir Douglas Galton, K.C.B., F.R.S., has been appointed chairman of the committee, and Professor W. H. Corfield, M.A., M.D. Oxon., has been elected treasurer. The address of the hon. secretary, Dr. Paul F. Moline, is 42, Waltonstreet, S.W.

DR. PAVY, F.R.S., will deliver the Croonian Lectures of the Royal College of Physicians of London at the Examination Hall, Victoria Embankment, on the afternoons of Tuesday, June 19th; Thursday, June 21st; Tuesday, June 26th; and Thursday, June 28th, at 5 P.M. Dr. Pavy's subject will be a "New Departure in connexion with Diabetes."

THE annual dinner of the Army Medical Department will take place on Monday next, June 18th, at 7.30 P.M., at the Whitehall Rooms, Hôtel Métropole, London. Applications for tickets and other communications should be made to Brigade-Surgeon-Lieutenant-Colonel J. Hector, 25, Anerley-park, Anerley, S.E.

MEMBERS of the profession who are desirous of seeing the highly interesting collection of Jenner relics and mementoes now on view at the First Avenue Hotel, High Holborn, should take an early opportunity of doing so, for we are informed that the exhibition will remain open only till the 20th of this month.

WE understand that there is nothing important to chronicle about Mr. Gladstone's progress during the past week. He has proceeded uninterruptedly to convalescence, and has left Carlton-gardens for Dollis-hill.

Pharmacology and Therapeutics.

WEIGHTS AND MEASURES IN RUSSIA.

IN Russia the system of drachms and ounces has up to the present existed along with the metrical system in pharmacy, and it has often been very puzzling to know whether "gr." was meant to stand for grain or gramme. Now, however, it has been ordered that the metrical system alone shall be employed in prescriptions.

AN ANTIDOTE FOR PRUSSIC ACID.

A Hungarian chemist, Dr. Johann Antal, has reported to the Hungarian Society of Physicians that he has found nitrate of cobalt to be a most efficacious antidote in cases of poisoning by cyanide of potassium or by prussic acid. The antidote is stated to have been first tried upon animals and afterwards upon forty living persons who had been accidentally poisoned with prussic acid, and it is said that in not a single case did the antidote fail. We fear there is but little chance of this discovery being of much service, since cases of poisoning by prussic acid usually run a very rapid course.

ZINCATED GELATINE IN ULCERS OF THE LEGS.

Zincated gelatine, which is recommended by Unna, is prepared by mixing ten parts by weight of oxide of zinc with an equal quantity of gelatine and forty parts of glycerine with forty of distilled water. The result is a white jelly-like mass which readily liquefies on the application of heat. This has been found by Dr. Iliushkoff very valuable as a dressing in ulcerated legs in out-patient practice, being cheap and easily applied. Although several of his cases were very chronic, the ulcers having indurated edges and fetid bases, he contrived to cure them all without obliging the patients to lie up First of all a hot foot-bath is given and the leg carefully cleansed with soap and a brush; the ulcers are then disinfected with a solution of corrosive sublimate of the strength of 1 in 1000. They are then—if not too painful—well rubbed with gauze soaked in the sublimate solution, dried with cotton wool, and sprinkled over with dermatol. Zincated gelatine is then applied in its liquid state over the whole leg and a bandage carefully put on, each turn being covered with more of the gelatine. This may usually be left untouched for at least a week.

HYDRASTININ IN UTERINE HÆMORRHAGE.

Hydrastinin, which is prepared by oxidising hydrastin, the alkaloid of hydrastis Canadensis, having been found useful in controlling many cases of uterine hæmorrhage due to various pathological conditions, a series of observations has been undertaken by Dr. Kallmorgen in Professor Gusserow's gynæcological clinic during the last two years and a half, with the object of determining the precise conditions under which the drug in question may be relied upon to exert a favourable action. Altogether it was given in eighty-six cases of uterine hæmorrhage, the form employed being half-grain pills, one of which was ordered three times a day. The treatment was as a rule well borne, but the patients frequently complained of painful uterine contractions and sometimes of slight gastric disturbances. The most constant and remarkable effects were observed in hæmorrhage due to retro-uterine hæmatocele, an immediate arrest of hæmorrhage being obtained in all the five cases of this character. In functional menorrhagia considerable success was obtained; here two pills daily were ordered a day or two before the expected period, with directions that three were to be taken as soon as it commenced and continued until its cessation. In hæmorrhage after abortion hydrastinin was usually efficacious, as also in cases due to lesions of the appendages. It was, however, of far less benefit in hæmorrhage due to chronic endometritis, to commencing abortion, and to uterine fibromata, though in all these classes of cases it sometimes proved useful. With hæmorrhages due to malignant disease no effect at all could be traced.

PERCHLORIDE OF MERCURY IN WHOOPING-COUGH.

A pledget of cotton wool soaked in a solution of perchloride of mercury of the strength of 1 in 1000 and pressed against the pharynx is the best and most successful treatment for whooping-cough according to Dr. Ranbitschek. When the pledget is being withdrawn care should be taken to brush over the tonsils, uvula, and soft palate with it. In severe cases this application should be made daily; ordinarily, however, every alternate day is enough. In two or three days a distinct improvement is usually observed, and after four or five applications the child is generally cured.

POISONING BY NITRO-BENZOL.

A case of poisoning by nitro-benzol is reported by Dr. Eugen Cissel, of the General Hospital, Vienna, where a woman who had taken 100 grammes (nearly three ounces and a half) of this substance was admitted in a highly cyanotic condition, with small pulse, superficial respiration, and dribbling of urine, which contained nitro-benzol. Artificial respiration was practised, and camphor injections were administered. Under this treatment consciousness was restored, and the patient recovered. On the fourth day the urine resembled that of a case of cystitis.

ICHTHYOL IN PHTHISIS.

According to Dr. Moritz Cohn of Hamburg ichthyol is of great value in pulmonary phthisis, especially for the poorer class of patients, to whom it is useless to recommend a sea voyage or a sojourn at a high altitude. It is less expensive than continuous treatment with creasote, and it has the advantage over both this and cod-liver oil of being better borne in many cases. Dr. Cohn has prescribed it for more than a hundred patients during the last two years and believes it has been of very great service, not merely in virtue of its anti-bacillary properties, but from its remarkable effect on the general nutrition. He orders a mixture of equal parts by weight of ichthyol and water and directs the patients to begin with four drops of the mixture three times daily before meals—if they can bear it; if not they may take the medicine after meals The patients soon get used to the taste. A little black coffee afterwards will help to cover it.

The dose should be gradually increased a drop daily until forty drops are taken at once, and it should always be well diluted with a wineglassful or more of water. The full dose must be continued for a lengthened period. Dr. Cohn promises to publish details of his cases. In the meantime he strongly recommends a trial of the method in out-patient and dispensary practice.

ST. THOMAS'S HOSPITAL: OPENING OF THE NEW MEDICAL SCHOOL BUILDINGS.

THE new buildings of the Medical School of St. Thomas's Hospital were opened on Saturday last, June 9th, by His Royal Highness the Duke of Connaught, the president of the hospital. His Royal Highness was accompanied by the Duchess of Connaught. Among those present were the Archbishop of Canterbury; the Lord Mayor and the Sheriffs of London; Dr. Russell Reynolds, the President of the Royal College of Physicians; Dr. Ord; Mr. Mackellar; Sir Spencer Wells; and Sir Henry Doulton.

Their Royal Highnesses were met in the Central Hall by the treasurers and almoners, the visiting staff, the consulting staff, and the lecturers, and conducted to a raised dais which had been erected in front of the main school entrance between the new buildings.

Addressing His Royal Highness, Mr. J. G. Wainwright (the treasurer of the hospital) expressed the great satisfaction felt by all at the presence of his Royal Highness. Referring to the cost of the new buildings and the income of the hospital, Mr. Wainwright said that it was fully anticipated that in the course of a few years there would be no uncertainty as to the necessary funds being provided by the estates and funds of the charity. He referred to the diminished value of the property of the hospital during recent years and said that it was impossible to open all the wards, from want of the necessary funds. It was proposed to appeal to the public for aid for the first time in the history of the hospital, and the governors hoped that with the countenance and help of His Royal Highness the response to the appeal would be a generous one.

Mr. G. H. Makins, the Dean, then briefly recapitulated the fortunes of the St. Thomas's Hospital Medical School. The present Medical School buildings, he said, were opened in 1871, when the entries amounted to seventy-seven, a number of new students largely in excess of any of the preceding ten years. In 1885 the increase in the number of students was so great as to necessitate further structural alterations at the expense of £2,700, defrayed by the teachers. And now, again, the teachers had come to their aid, and had borrowed a sufficient sum to carry out the new and necessary work.

The Duke of Connaught, who was enthusiastically received, thanked Mr. Wainwright and Mr. Makins for their interesting reports Together with Guy's Hospital, St. Thomas's, he said, shared the honour of serving the population on the south side of London. It was, therefore, necessary that there should be a properly equipped medical school, fitted to do all that was essential for the instruction of the students, and it was a most important matter that the hospital should be freed from debt. The medical officers had set a noble example. They had willingly, and at great risk to themselves, arranged to defray the expense of these excellent buildings which he was about to open, and he thought that all should follow in their footsteps and do what they could to clear off that debt. His Royal Highness then read some statistics to show the benefit which this hospital has been to the poor and the rich of London and the adjacent districts. The total of in-patients in twenty years had been 92,073; during this time the out-patients had been 467,319. The casualty patients had been 1,150,393, and the attendances 2,674,845.

After prayer by the Archbishop of Canterbury, Sir Henry Doulton proposed, and Dr. Ord seconded, a vote of thanks to the president, who, in his reply, said that the noble work done by Miss Florence Nightingale in the training of nurses, and her connexion with St. Thomas's Hospital should constitute an additional claim upon the liberality of the public in respect to that hospital.

The band of the Coldstream Guards, under the direction of Mr. Thomas, played during the afternoon, and refreshments were provided in a large tent for the numerous visitors.

In the evening the dinner of the medical staff was held in the new club buildings, and for the first time, in order to mark the special occasion, guests were invited. The chair was taken by Dr. Ord, the senior physician, the number of those present being about a hundred. After the dinner (which was excellently served by the new caterer) Dr. Ord proposed the only toast usually permitted at these dinners, that of "Her Majesty the Queen"; additional ones were, however, allowed by the chairman at the earnest solicitation of some present, and Dr. Crosby proposed "Continued Success to the St. Thomas's Medical School," to which Mr. Makins responded; and the treasurer, Mr. J. G. Wainwright, gave the "Health of the Chairman," who briefly replied. An adjournment was then made to the spacious new smoking and reading room, where a musical entertainment was enjoyed.

INTERNATIONAL FIREMEN'S CONGRESS.

Serious Accidents at Antwerp.

(FROM OUR SPECIAL CORRESPONDENT.)

Antwerp, June 12th.

DR. BEUDIN of Molenbeek-Saint-Jean, a suburb of Brussels, read a paper at the International Congress of Firemen, expounding the advantages that would result if an ambulance corps were attached to each fire brigade. Dr. Beudin little thought that in so short a time a deplorable event would confirm the wisdom of his suggestion. The sittings of the Congress were of brief duration. Firemen are not parliamentarians, but men of action; and the chief object of such an international gathering is the exhibition of the apparatus employed and the manœuvres and drill of the various organisations. For this purpose a wooden house, four storeys high, had been built on the Place St. Jean, one of the largest squares of Antwerp. During the whole of Sunday afternoon a number of Belgian and some French fire brigades went through various evolutions before this temporary structure. On each side of the square there were stands, fortunately very low, to which the public were admitted on payment of the modest sum of half a franc. In front, at the extremity of the square facing the wooden house, was a more pretentious and loftier stand reserved for the members of the jury, guests, the press, &c. The manœuvres consisted in showing first how rapidly the various fire engines when brought before the house could be put into working order. Then the firemen scaled the outer walls for the purpose of rescuing persons within. Various methods of lowering people out of the windows were tried, and of course there was a large number of fire escapes brought into requisition. Perhaps one of the most interesting was the descent of a man supposed to be unconscious without the aid of any apparatus. The fireman who played the part of the patient was carefully balanced on the back of another fireman, and with this heavy burden the latter came out of the window of the third floor and slowly descended a ladder. It is difficult to say which of the two men displayed the greatest courage—the fireman who hung limp and as if unconscious across the back of his comrade, with nothing to prevent his falling, or the fireman who undertook to convey this living human freight down the ladder from so great a height. The success of the operation depended on the careful balancing of the burden and its complete inertness. The French firemen had with them the small fire pumps that are drawn by hand and small ladders with which only one window can be reached. It is then necessary to enter by the window, unhook the ladder, lift and fix it to the window above. In this manner, according to the French drill, the second floor should be reached in seven minutes.

The manœuvres of the first day passed off very successfully, but apparently the town authorities had altogether under-estimated the crowd that would be present on the second and last day. On this occasion the British delegates were to be present, and the performance was to conclude by the burning of the wooden house, and the conflagration was to be extinguished by the Antwerp firemen. Members of the National Fire Brigades' Union in large numbers had come to Antwerp. The British delegation amounted in all to about 179 persons, under the command of Sir Eyre M. Shaw. They brought with them a team of horses, several steam fire

engines, a gigantic fire escape, &c This magnificent display came over in the *Adelaide*, of the Harwich and Antwerp line, especially chartered for this purpose. Needless to say that the British firemen, with their glittering helmets, their thoroughbred horses, and splendid physique made a brave display. Never had such a sight been seen at Antwerp, and it is no wonder that a large concourse assembled. Besides, there was the house to be burnt down, and a fire is always a great attraction to a crowd. Soon the stands on either side were crammed with people, and many of the spectators began to gather in front of the stands where the ground should have been reserved exclusively for the firemen. Behind the stands in the surrounding streets an immense throng surged backwards and forwards. The British firemen had just entered the arena, and were driving the engines round to the loud applause of the spectators, when a crash was heard, followed by piercing shrieks. From the grand or central stand I was able at once to perceive the stand on my right had given way. To increase the confusion the crowd in the streets behind at once invaded the broken stand; in fact, a breach had thus been made in the sort of wall which kept the populace back. Hardly had the public time to realise the nature of the accident which had occurred than another crash was heard, and the stand on the left-hand side gave way in the same manner. Then the panic increased fourfold. The persons on the stand who were able to keep their legs leaped into the arena, while the crowd in the street behind demolished what remained of the two side stands and also pressed forward into the arena, partly propelled by those behind and partly drawn forward by the curiosity to see what had occurred. It was at this moment that the appropriateness of Dr. Beudin's suggestion received unexpected but very emphatic confirmation. The British contingent had with them Chief Surgeon F. R. Russell and Dr. C. O. Honnywill and the Aldershot Fire Brigade ambulance. A great number of the British firemen have gone through the St. John Ambulance training, and were therefore well prepared and fully able to render efficient service. I saw a boy whose foot was badly injured, and whose toe Dr. Russell had to amputate. Of course, there were many other persons hurt. The Belgian police, who numbered only about thirty men, were utterly helpless. Alone, the British firemen were able to maintain a little order and keep a small open space by joining hands and pressing the crowd back. The fire engines were also driven round to keep the people back; but this was too dangerous a process to be effective. After a few vain efforts to maintain an open space the manœuvres had to be abandoned, the *fête* given up, and the firemen retired from the scene. The wooden house was not ignited, and the crowd, which by its unruly eagerness to press forward had marred the whole day, now in its turn gradually melted away. Disappointment was depicted on almost every face, while many were severely shaken and alarmed by the accidents which had occurred. On inquiry I am assured that about eighty of the British firemen have qualified in ambulance classes, and the Aldershot engine has a folding stretcher and ambulance requisites attached. Other firemen make use of their ladders, and these, together with the Aldershot stretcher, were used on Monday. It was, therefore, because the British firemen had already in their organisation carried out the principle advocated at the Congress by Dr. Beudin that such prompt assistance was forthcoming. Our fellow countrymen are to be congratulated on their prompt and useful action on this occasion.

SUGGESTED SCHEME FOR THE MIDWIVES' REGISTRATION BILL.

DR. BOXALL and Mr. Rowland Humphreys, hon. secretaries of the Midwives' Registration Association, have forwarded us a copy of the scheme for registration of midwives. We can only give an abstract of the chief features of it. These are contained under several headings: (1) The Local Midwives' Board; (2) the Central Midwives' Board; (3) the General Medical Council; (4) the County Councils; (5) Registration; (6) Finance; (7) Penalties.

Local Midwives' Board.—This is to consist of examiners appointed by the Medical Council. Failing this, the Privy Council is to invite some other medical body to make the appointments, or to make them itself. It will be the duty of the board to examine candidates; to consider and investigate charges of malpraxis or misconduct referred to them by the Central Board; to make returns of candidates examined, of moneys received, &c.

The Central Midwives' Board.—To consist of all the acting examiners, who must be registered medical practitioners. Its duties will be to frame rules for instruction and conditions of admission to examination for approval by the General Medical Council; to nominate examiners for appointment by the Medical Council; to fix examination centres; to fix rules for approval by the General Medical Council for admission to the Midwives' Register; to keep a general list or register of midwives; to be the sole judges of charges against midwives; to determine erasures and to control expenditure.

The General Medical Council.—The General Medical Council is to be invited to undertake to decide as to the qualifying course of instruction and the scope of the examination; to decide the rules for admission to the Register, also rules for limiting and regulating the practice of midwives; to appoint examiners.

The County Council.—The County Council is to keep the current copy of the Midwives' Register; to appoint a local supervising authority, to consist of the local medical officer of health or other medical man, to undertake prosecutions. The local supervising authority is to transmit to the Registrar certificates of persons claiming to be registered; to intimate deaths and changes of address to the Registrar; generally to supervise, to investigate charges, and report to the Central Board.

Registration.—Every candidate must comply with the rules of admission laid down by the Central Board under the direction of the General Medical Council. No woman is to use the title of midwife or its equivalent unless registered. The conditions of admission to the Register are either training or *bonâ fide* practice as a midwife for a time to be defined by the General Medical Council.

Finance.—The fee for examination is to be two guineas; that for registration 5*s*.

Penalties.—Penalties are provided for fraud, for false use of title, for false registration of titles, for misdemeanour, felony, and infamous conduct as a midwife, and for infraction of rules.

Explanatory Notes.—A midwife is defined as a woman who undertakes to attend cases of natural labour. And it is explained that "this certificate does not entitle the holder to treat any complication or abnormal condition in mother or child; to treat or prescribe for any illness, or perform any obstetric operation. In such circumstances the services of a registered medical practitioner should be obtained."

UNIVERSITY COLLEGE HOSPITAL: FESTIVAL DINNER.

A DINNER in aid of the funds of this charity was held on Wednesday, June 13th, at the Criterion Restaurant, under the presidency of Mr. Justice Charles, a distinguished son of University College, and the practical result of a pleasant evening was a substantial benefit to the exchequer of the hospital.

After the usual loyal toasts Dr. Poore proposed "The Army, Navy, and Reserve Forces" in a bright little speech, pointing out that probably the first physicians the world ever knew were called into being by the dangerous practices of war. Brigade-Surgeon-Lieutenant-Colonel Notter, Professor of Hygiene in the Army Medical School at Netley, replied. Mr. Christopher Heath then proposed "The Houses of Parliament," in a few humorous words. Mr. Benjamin Cohen, M.P. in an excellent reply, while he repudiated any desire to criticise Her Majesty's Government, could not forbear to instruct the company in a practical method of "dodging the death duties." He recommended that all who had given to University College Hospital a place in their wills should at once cancel the bequests and hand the sum over forthwith in cash to the treasurer.

Mr. Justice Charles then gave "Prosperity to the Hospital," unfolding as he did a tale of excellent work under the most depressed pecuniary circumstances. Basing the claim of the charity chiefly upon the fact that the neighbourhood to which University College now ministered had changed almost from country to town during the past half century, he made a forcible appeal for such a sum as would enable the authorities to carry out the necessary measures of reconstruction without being compelled to close any of their beds.

Dr. Russell Reynolds proposed "The Hospital and Medical Committees" in the words of one entirely conversant with the inner workings of our hospitals. He congratulated the two bodies in power at University College Hospital—the lay governors and the medical staff—upon the fact that, though temporary friction might and must be sometimes present, the ultimate common object of both bodies had been to secure for the sick poor the utmost advantage. To this Mr. Henry Lucas, the chairman of the Hospital Committee, and Mr. Victor Horsley, the dean of the Medical Faculty, replied.

The secretary, Mr. Newton H. Nixon, then announced the subscriptions and donations which had been received by the treasurer in connexion with the festival dinner, the gross

total of which was over £4500. Of this sum, £2000 was given by Mrs. N. Montefiore, daughter of the late Isaac Lyon, Baron Goldsmid, to found a bed.

CHOLERA.

CHOLERA still prevails in Warsaw and its vicinity. There were 22 cases and 10 deaths in the city of Warsaw itself within the last five days of the date up to which intelligence has been received; 22 cases and 13 deaths in the government of Warsaw, and 11 cases and 6 deaths in the government of Ploçk, have also been recorded in the space of a few days. Although the disease cannot consequently be said to prevail in Russian Poland to any great extent, it is nevertheless disquieting to learn that some 55 new cases and 29 deaths occurred there in less than a week.

Some cases of cholera have also occurred on the Prussian part of the Vistula, and it is announced that, comma bacilli having been found in the water of that river near Dantzic, the police have closed the bathing establishments and forbidden the use of the water, while extra precautions have been taken in the way of sanitary supervision and preparation in the districts. The correspondent of the *Standard* states that Professor Koch had gone to Dantzic to confer with the local authorities and inspect the localities where cases of choleraic disease had occurred.

The persistent manifestation of this disease in Brittany is a noteworthy fact to which we have already called attention. The Paris papers deny that France is threatened with an epidemic of cholera, and it is stated that Professor Netter had failed to discover any trace of Koch's bacillus in a few fatal cases of cholerine which had occurred.

As regards the late epidemic at Lisbon, it seems to have been now established, as stated in THE LANCET at the time, that the disease was not cholera. A great deal of unnecessary alarm and mischief was created by statements to the contrary. The disease was not fatal for one thing, and was not, bacteriologically speaking, identical with cholera for another.

THE ROYAL SOCIETY CONVERSAZIONE.

MANY of the objects of scientific interest exhibited at the Royal Society on May 2nd were once more submitted to view at the conversazione held on Wednesday last—"ladies' night." There were, however, some interesting additions, which may be briefly described, while certain of the former exhibits have re-established a claim to attention, because they have recently been the subject of popular lectures at the Royal Institution and elsewhere. Thus the remarkable series of photographs of a splashing drop shown by Professor A. M. Worthington and Mr. R. S. Cole proved a source of considerable interest and speculation. The photographs, which serve also to illustrate the exquisite sensitiveness of the very rapid modern plate, were obtained by allowing a drop to fall in absolute darkness and illuminating it at any desired stage of its splash by a suitably-timed Leyden jar discharge taking place between magnesium terminals. Close by were some photographic prints in natural colours by Mr. W. Kurtz, of New York, produced by the following process: By the intervention of suitable media three photographs are obtained, severally appropriate to the three primary colours composing the original picture or view to be reproduced. From these three photographs, respectively due to the chemical action of the red, yellow, and blue rays of the spectrum, printing blocks are prepared, which, being printed from in red, yellow, and blue ink, give the multi-coloured effects shown by the specimens.

Professor Stewart showed several specimens which served to illustrate his recent lectures at the Royal Institution on Locomotion in Life; but considerable subject for thought was afforded in the specimen of mummy cloth, which was also included in this group and which was compared under the microscope with a specimen of the purest Irish linen of to-day. The mummy cloth was made more than 6000 years ago (Fourth Egyptian Dynasty), and yet, on comparison, it could be seen that the strands of the mummy cloth were 300 by 150 per inch, whereas those of the Irish linen are 140 by 140.

Vacuum tubes and illustrations of high-tension phenomena were conspicuously absent, but there were to be seen one or two interesting applications of the electric current. The "telautograph," for example, of Professor Elisha Gray furnishes a new method for transmitting news and intelligence by electricity, so that the writer at one station, using a lead pencil attached mechanically to the apparatus and writing upon ordinary paper, transmits to a distant station (illustrated in the room by a wire three miles long) a facsimile of his handwriting at his ordinary writing speed. Mr. C. T. Snedekor showed a means of heating by electricity for hospital purposes. The apparatus, consisting practically of a resistance coil of peculiar construction, is enclosed in an elastic and flexible case with a silk or woollen covering, so that it can be applied to and envelope any part of the body as a fomentation, or, as the inventor suggests, it may be used as a footwarmer and generally for warming purposes in the bedroom or carriage. An advance in aural studies was exemplified in the sonometer of Mr. J. P. Hawksley, which is devised to measure the relative and comparative perception of hearing. Many of the brilliant experiments formerly exhibited by Professor Sylvanus Thompson were repeated, but an interesting addition consisted in the application of a Hughes induction balance for the purpose of testing for the presence of metal of any kind in alleged bullet-proof shields.

In the lantern room admirable illustrations of the influence of environment upon the colours of certain lepidopterous larvæ were furnished by projections on the screen of the beautiful specimens exhibited by Lord Walsingham and Professor E. B. Poulton.

The rooms were not unpleasantly crowded, although, as usual, the number of distinguished persons present was very large.

AFGHAN PHYSICIANS AND SURGEONS.

BY J. A. GRAY, M.R.C.S. ENG.

THE Hakims, or native Afghan physicians, practise, I was informed, according to the Yunani, or ancient Greek, system of medicine. The only books I could obtain on this system were written in Arabic, and this was an obstacle to my studying them; but, whatever the teaching of their books may be, the Hakims, I found, knew nothing whatever about anatomy, physiology, or pathology. Their treatment of disease is entirely empirical. They act according to "authority." Studying disease, not in the living subject, but in their books only, they have made no progress whatever upon the teaching of their ancestors. A sick man is brought to them, and some prominent symptom forces itself upon their notice. This is at once diagnosed as the disease. For instance, pain in the abdomen is to them "colic." It is described in their books and a certain line of treatment directed. They do not examine the patient or attempt to find a cause for his pain; nor do they differentiate between different forms of colic, for they have not noticed that pain in the abdomen is sometimes due to other causes than an accumulation of solids and gas in the bowel. As an example, Perwana Khan, the Deputy Commander-in-Chief in Kabul, was for some weeks attended by the Hakims, who, reporting him to be suffering from colic, administered purge after purge. As, however, he did not seem to be getting any better the Amir desired me to examine him. I found he had acute pain shooting from the left lumbar region to the testicle, and that he was passing blood in his urine. The attacks of pain came on, he said, after he had been riding on horseback. A small hypodermic injection of morphia relieved the spasm of the ureter and he was overjoyed, declaring himself cured. I explained, however, to the Amir what was wrong. To the Hakims, dropsy is a disease and can be cured by the treatment set forth in their books. No attempt is made to discover the cause of the dropsy—it is simply an accumulation of gas (Bâd) in the tissues. In diseases of the chest they do not, of course, employ auscultation and percussion; and bronchitis, pneumonia, and phthisis are classed together under the name of Sûrfa, or cough. This, they say, is due to an accumulation of slime (Balgham) in the body. In some cases the sûrfa is accompanied by Dârd-i-Sina, or pain in the chest, and occasionally blood as well as slime is coughed up; these are

recognised as bad cases. A young brigadier—the English military titles are used in the Afghan army,—who was a cousin of the Sultana, was for some time under the Hakims suffering from cough with Dârd-i-Sina. As he did not improve, her Highness desired me to see him. I found he was suffering from advanced phthisis, and had a cavity in the apex of the left lung. I did not want to have the credit of killing him, so I sent my report in at once. The Hakims did not in the least mind my being sent for to their cases after they had become hopeless. "Behold," they said, "the Feringhi doctor cannot cure them any more than we."

Malarial fevers are diagnosed as cold fever or hot fever, according to whether there is a shivering stage or not. They are treated by copious bleedings and purgings, and by very low diet. The town of Mazar-i-Sherif, which is intensely hot in the summer, with hot winds and dust storms, and very cold in the winter, with icy winds, is in a malarious, almost desert, plain in Turkestan. Here the soldiers of the Amir's army were attacked by a very severe form of remittent fever. Under the Hakims the mortality was enormous. The army was being, not decimated, but swept away. Had the Hakims left the men untreated some of them might have recovered; but in spite of their want of success they went blindly and persistently on with their treatment by bleeding and starvation. When I arrived the bodies were being carried out of the hospital in great numbers every day. The hospital was a large garden or orchard, and the beds were under the trees. Directing all the newcomers — and they poured into the hospital—to be taken to a separate garden, I attended to them myself, making a preliminary round with a notebook, and a second with medicines, which were administered before me. I could trust no one: the dispensers and Hindostani hospital assistants were, I knew, open to bribery, and the Hakims would have shrunk from nothing to bring discredit upon the Feringhi interloper. A sentry was, therefore, placed at the gate to prevent any Hakim from entering or coming near my enclosure. After some months, when I had become known, I found whom I could trust and did not have to take such precautions. The fever yielded readily to quinine and to cinchona febrifuge, a preparation used in India. The difference in the mortality after European and after native treatment was naturally striking, and the news spread far and wide, especially among the soldiers, the poorer townsfolk, and peasants, so that I had far more work before me than I could possibly get through in the day. The way one's time was allotted may be interesting. After a light breakfast I galloped off to the hospital at daybreak to escape the intense heat. After my rounds there I reached home about eleven, changed all my cloths, and put on a dry flannel suit; then, lying on my couch in an inner room with all the doors and windows shut to keep out the heat, I munched some of the most delicious fruit (peaches, grapes, and melons) that it has ever been my good fortune to taste. At this time I had not become saturated by malaria, and I could eat fruit without any evil resulting. I slept for an hour, had lunch, and at two o'clock went to an underground room, which was comparatively cool, to see the patients, who had been gathering in crowds round the house. I continued to see them till six in the evening and then ceased whether there were many or few remaining. After dinner I saw the one or two who had obtained a special order from the Amir for me to visit them at their homes. The hospitals and dispensaries in Afghanistan are primarily for the use of the soldiers and are of course free, but his Highness allows the townspeople also to make use of them without any payment.

The Turkestan fever that I was speaking of was of the remittent type. A great many cases were complicated by hæmorrhages from mucous membranes, particularly epistaxis, which, in those cases treated by the Hakims, was encouraged as beneficial. There were some cases of an asthenic type in which the fever was not very high, but which were characterised by constant vomiting and great prostration. Neither food nor quinine remained on the stomach, and the patient died in a day or two. There were other fatal cases in which the patient rapidly became jaundiced and comatose; but in the majority of cases quinine acted as a specific. A peculiar sequela of the fever—and it occurred in a great number of cases—was suppuration of the parotid glands. The inflammation attacked first one gland; but usually a few days afterwards the second was affected. The gland seemed almost to resemble a sponge soaked with pus, and generally more than one incision was necessary to allow the discharge to escape. This "epidemic" of fever — if I may use the expression in connexion with a place where malarial diseases are "endemic" — began in the spring, lasted through the whole of the summer, and died out when the cold weather began. In the autumn I was myself taken ill with a fever, but had neither epistaxis nor suppuration of the parotids. As, however, the attack has certain points of interest and my notes are, for obvious reasons, more copious in this case I will briefly describe it. I have said "attack," but there were three separate attacks following one another, and each differing from the others. From Oct. 28th to Nov. 5th, 1889, there was severe nasal catarrh with aching in the lower part of the back. The temperature, taken once, on Nov. 2nd was 103° F. Expectorants and diaphoretics not producing any improvement, I kept to the house; the temperature was noted every hour during the day; and for the next ten or twelve days 20 gr. of quinine were taken daily in divided doses. For six days the temperature during the morning remission came down from 100° to normal, the remission increasing in length day by day, and the afternoon temperature from 103° became 101°. At the time it was being administered the quinine seemed to have but little effect in checking the rise, and the temperature oscillated in a curious way. For instance, on the third day, Nov. 8th, the temperature at 1.30 and 3 A.M. was 101°; from 7 to 10 A.M. it was normal; at 2 P.M. it was 103°; at 4 101°, at 5 102·8°, at 7 100°, and at 9 P.M. 101°. On the 7th day (Nov. 12th) there was an exacerbation of fever with somewhat violent cough. I was not able to auscult on account of the insuperable difficulties there are in the way of listening to one's own chest with a straight stethoscope. There was but a slight morning remission, and the afternoon temperature was 103·6°. Quinine was continued, and the temperature, though still oscillating, came down day by day for seven days. On the 19th only 5 gr. were taken at 11 A.M., the afternoon temperature being 99·2°. On the 20th no quinine was taken, the temperature oscillating between 97° and 99°. On this day I rode out on horseback, but the weather had changed from hot to cool while I had been in the house, and, though there was bright sunshine, there were keen winds blowing. I did not feel chilled but exhilarated by the wind; but after my return I found the temperature considerably subnormal — 96 8°. On the 21st began the second attack of fever, differing considerably from the first. I felt chilly about 11 A.M., temperature normal, and sat in the sun by the window to get warm. At 12 the temperature was 97·8°, and shivering commenced; an hour afterwards it was 103°. Half an hour afterwards—namely, at 1.30 P.M.—it was 99·4°, and I took quinine 5 gr. In another half-hour it was 103° again; at 4 P.M. it rose to 104·2°, and remained so for an hour. There was severe headache, and another 5 gr. were taken. From 5 to 7 the temperature fell to 103°, where it remained. At 7 some soup was taken, but was vomited at once. At 8 P.M. 5 gr. of quinine were taken and remained on the stomach.

I took to my bed and remained there for a week. On the 22nd the temperature from 8 A.M. to 1 P.M. oscillated between 100° and 102°, and at 2 P.M. rose to 102 2°. Five grains of quinine were taken at 9 and 11 A.M. and 2 P.M. Marked quinism was observed, buzzing, deafness, trembling of the hands, and rapid feeble pulse, so that the next 5 gr. were not taken till 8 P.M. From 2 to 11 P.M. the temperature went steadily down to normal. Pain and tenderness in the epigastrium were observed. The bowels were opened freely by two teacupfuls of Hunyadi Janos water taken at 8 A.M. From 9 to 11 P.M. there was sound sleep, with most profuse sweating. There had been no shivering or sweating in the first attack. The next day the temperature oscillated between 97° and 98 4°, rising to normal at 3 and 5 P.M., but descending again. Five grains of quinine were taken at 3 P.M. There were found to be pain and tenderness to the right of the epigastrium, with enlargement of the liver, and on a deep breath or cough pain shooting from the region of the liver to the right shoulder. The tongue was clean; there was no jaundice or vomiting. At midday a mustard leaf was placed over the liver for half an hour, and a ten-minim dose of dilute nitro-hydrochloric acid was taken morning and evening. A little roast fowl was eaten on this and the following days. The bowels acted freely. On this day the Amir sent his chief secretary on a visit of condolence; I did not get up, but received him in bed. On the 24th the temperature oscillated between 97° and 98°. There were still enlargement and tenderness of the liver, and

pain in the region of the right scapula. Ten minims of diluted nitro-hydrochloric acid were taken at 9 A.M. and 1 P.M. From 12 to 1 a mustard leaf was applied over the liver, and at 5.30 P.M. podophyllin resin, ¼ gr., was taken. Naturally one's thoughts were centred upon "abscess of the liver" produced by a chill. After the second dose of diluted nitro-hydrochloric acid there was an hour's sleep, with profuse sweating. Fruit was eaten during the day, and the bowels acted once in the morning. On the 25th, at 7.45 A.M., a juicy pear was eaten and two teacupfuls of saline mineral water were taken in tea; at 8.30 A.M. the bowels acted freely, a liquid yellow motion being passed. The tenderness to the right of the epigastrium was much less. More fruit was eaten during the day, and there was another action of the bowels at 5 P.M. The temperature at 9 A.M. was 96·6°. It gradually rose during the day, and at 5 P.M. was 97·4°. On the 26th and 27th, the bowels remaining open, no medicine was taken, and the pain and tenderness over the liver were markedly less. The temperature was 97°, rising in the afternoon to normal. On the 28th, the morning temperature being a point or two above normal, 5 gr. of quinine were taken. In the afternoon, well wrapped up in woollens and a fur postin, I walked on the top of the house for an hour. There was still some cough. On the 29th, well wrapped up, I went for a ride on horseback for an hour. At 8.15 P.M. ¼ gr. of podophyllin was taken, and later some ipecacuanha wine, and compound tincture of camphor for the cough. The temperature was normal all day. On the 30th a cup of saline mineral water before breakfast moved the bowels freely. At 1 o'clock I went for a ride. It was sunny but frosty, and I went too far, returning at 3 fatigued and stiff. The temperature went up a little, and 5 gr. of quinine were taken, but this was the beginning of the third attack of fever, which lasted for nearly a month. This attack bore some resemblance to the first, but differed from it in that the 8 A.M. temperature was 99° and the fever increased from then fairly regularly till 5 o'clock in the afternoon, when it gradually fell to 100°. On Dec. 1st the temperature at 5 P.M. was 99·6°, where it remained; 5 gr. of quinine were taken. On Dec. 2nd the temperature at 5 P.M. was 101·2°, at 11 P.M. 100·2°; 15 gr. were taken. On Dec. 3rd the temperature at 5 P.M. was 103°, at 10 P.M. 101·6°; 10 gr. were taken. Finding the temperature so much higher on the 3rd, I began to wonder if the quinine were doing good or harm. The cough increased somewhat; there were tenderness of the liver, headache, pain at the back of the eyeballs, and dyspeptic symptoms. Animal food was left off, and I kept to bed. The quinine was continued. On the 4th 20 gr., on the 5th 25 gr., and on the 6th 20 gr. were taken in 5-gr. doses at intervals of three hours, and the bowels kept freely open. The 5 P.M. temperatures on these three days were 103°, 102·6°, and 102·4°, so that in spite of the fairly large doses of quinine the effect on the temperature was slight. On the 7th, 8th, and 9th the quinine was administered differently, 10 gr. being taken at 10 in the morning, and two doses of 5 gr. in the afternoon. The 5 o'clock temperatures on these days were 102·4°, 101·8°, and 101·4°; and the 10 P.M. temperatures were 100·2°, 99·8°, and 99·4°. The rise, too, was not vigorous till after 12 o'clock (noon). On the 10th there was marked improvement; 10 gr. of quinine were taken at 9 A.M. and 10 gr. at 2 P.M., and the 5 P.M. temperature was only 100·8°, the 10 P.M. being 99°. On the 11th news was brought me that one of the Amir's pageboys, a favourite, had broken his thigh. Knowing that no one could set it but myself I dressed and went to the palace to see him, and was away from 2 to 4 P.M. For the next five days I went to the palace daily, with the result that the afternoon temperature gradually crept up again above 101°, and the evening temperature, instead of being 99°, was 100°. On my return from the palace the temperature was generally subnormal. A 10-gr. dose was taken on each of these days night and morning except on the 16th, when 5-gr. doses were taken at intervals of three hours. On the 17th, 18th, 19th, and 20th I did not go out and the 5 P.M. temperatures were 100·8°, 100·6°, 100·2°, and 99·6°, and the 10 P.M. only a point or so above 99°. The 8 A.M. temperature was normal, but the rise began from then; 20 gr. of quinine were taken on each of these days. On the 21st, 22nd, 23rd, and 24th the chart seemed to have been shifted down a degree, for the 8 A.M. temperature was 97° and the 5 P.M. were 99·2°, 99°, 98·4°, and 98·4°. On these days 15 gr., 10 gr., 6 gr., and 5 gr. of quinine were taken. On Christmas Day the temperature did not rise above normal and no quinine was taken. I had no return of fever for many months afterwards and never another prolonged attack. Dr. Weir, however, the health officer of Bombay, told me he still suffers from occasional attacks of the fever he contracted in Turkestan.

When the daily doses of quinine were left off there were occasional paroxysms of severe facial neuralgia, but 5 gr. of quinine invariably gave relief. It is interesting to note that, though the spleen was examined frequently and with great care, no enlargement whatever was detected during or after any of the three attacks. During the third attack of fever aching and tenderness of the finger-nails were noticed, and after recovery a groove and ridge were to be seen across each nail. During convalescence, also, the secretion of the sebaceous follicles all over the body was greatly increased, so that not only did the skin feel oily, but with a pocket-knife globules of oil could be scraped from the chest and back. The nasal mucus, too, was for a fortnight offensive. The chart and notes of the case led me to conclude that when attending a case of malarial fever it is useless to take the temperature twice or even three times a day; that to understand the "habit" of the fever one is dealing with the temperature must be taken at least every hour; that in the administration of quinine a large dose given before the expected rise is more effectual than the same amount given in smaller doses at intervals during the day; and that the bed should be kept throughout the attack. I had ample opportunity afterwards of testing the truth of these by no means novel conclusions.

(To be continued.)

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5907 births and 3388 deaths were registered during the week ending June 9th. The annual rate of mortality in these towns, which had been 17·7 and 17·0 per 1000 in the preceding two weeks, further declined last week to 16·9. In London the rate was 16·8 per 1000 and was slightly below the average rate in the thirty-two provincial towns. The lowest rates in these towns were 9·8 in Portsmouth, 12·4 in Blackburn, 13·1 in Swansea, and 13·5 in Croydon and in Leicester; the highest rates were 19·1 in Halifax, 20·1 in Preston, 20·5 in Birmingham, 20·8 in Salford, and 25·4 in Liverpool. The 3388 deaths included 513 which were referred to the principal zymotic diseases, against 559 and 520 in the preceding two weeks; of these, 241 resulted from measles, 108 from whooping-cough, 51 from diphtheria, 36 from scarlet fever, 33 from "fever" (principally enteric), 28 from diarrhœa, and 16 from small-pox. No fatal case of any of these diseases occurred last week in Norwich, Derby, or Bolton; in the other towns they caused the lowest death-rates in Blackburn and Huddersfield, and the highest rates in London, West Ham, Liverpool, Oldham, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Oldham, Nottingham, London, and West Ham; and from whooping-cough in Cardiff, Halifax, Croydon, Sheffield, and Newcastle-upon-Tyne. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 51 deaths from diphtheria included 34 in London, 4 in Liverpool, and 2 each in West Ham, Cardiff, Birmingham, and Oldham. Eight fatal cases of small-pox were registered in Birmingham, 3 in London, 3 in Manchester, and 2 in West Ham, but not one in any other of the thirty-three towns. There were 227 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, June 9th, against 219, 236, and 234 at the end of the preceding three weeks; 42 new cases were admitted during the week, against 69 and 58 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2232, against 2307, 2271, and 2277 on the preceding three Saturdays; 264 new cases were admitted during the week, against 216 and 218 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 248 and 222 in the preceding two weeks, increased to 236 last week, but were 24 below the corrected average. The causes of 55, or 1·6 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner.

All the causes of death were duly certified in Bristol, Oldham, Bradford, Sunderland, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Brighton, Birmingham, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had risen from 17·4 to 20·3 per 1000 in the preceding three weeks, declined again to 19·3 during the week ending June 9th, but was 2·4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·6 in Leith and 17·2 in Perth to 20·9 in Aberdeen and 21·4 in Paisley. The 551 deaths in these towns included 18 which were referred to whooping-cough, 11 to diarrhœa, 8 to small-pox, 8 to scarlet fever, 7 to diphtheria, 5 to "fever," and 5 to measles. In all, 62 deaths resulted from these principal zymotic diseases, against 61 and 75 in the preceding two weeks. These 62 deaths were equal to an annual rate of 2·2 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 26 to 37 in the preceding three weeks, declined again to 18 last week, of which 11 occurred in Glasgow. The 8 deaths from scarlet fever showed a slight further increase upon the numbers returned in recent weeks, and included 5 in Glasgow. The fatal cases of diphtheria, which had been 6 in each of the preceding two weeks, were 7 last week, of which 5 occurred in Glasgow. The deaths referred to different forms of "fever," which had been 6 and 8 in the preceding two weeks, declined to 5 last week and included 3 in Glasgow. Of the 8 fatal cases of small-pox 4 were recorded in Leith and 4 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 89 and 95 in the preceding two weeks, further rose to 107 last week, and corresponded with the number in the same week of last year. The causes of 46, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·2 and 25·2 per 1000 in the preceding two weeks, declined again to 21·5 during the week ending June 9th. During the past ten weeks of the current quarter the rate of mortality in the city has averaged 23·3 per 1000, against 17·9 in London and 17·6 in Edinburgh. The 144 deaths registered in Dublin during the week under notice showed a decline of 25 upon the number in the previous week and included 6 which were referred to the principal zymotic diseases, against 15 and 12 in the preceding two weeks; of these, 4 resulted from diarrhœa, 1 from whooping-cough, 1 from "fever," and not one either from small-pox, measles, scarlet fever, or diphtheria. These 6 deaths were equal to an annual rate of 0·9 per 1000, the zymotic death-rate during the same period being 3·3 in London and 1·5 in Edinburgh. The fatal cases of diarrhœa, which had been 3 in each of the preceding two weeks, were 4 last week. The mortality both from whooping-cough and from "fever" was below that recorded in any recent week. The 144 deaths in Dublin last week included 19 of infants under one year of age, and 37 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers in the preceding week. Seven inquest cases and 5 deaths from violence were registered; and 54, or more than a third, of the deaths occurred in public institutions. The causes of 7, or nearly 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MAY, 1894.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during May in each of the forty-three sanitary districts of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 9·6 per 1000 of the population, estimated at 4,349,166 persons in the middle of this year. In the preceding two months the rates had been 8·9 and 10·2 per 1000. Among the various sanitary districts the rates were considerably below the average in Kensington, Hammersmith, Westminster, Hampstead, St. Giles, St. Olave Southwark, and Lee; while they showed the largest excess in Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Rotherhithe, and Lambeth. The prevalence of small-pox in London showed a further marked increase during May, an average of 46 cases weekly being notified, against 15, 16, and 31 in the preceding three months; of the 230 cases notified during last month, 40 belonged to Poplar, 32 to Islington, 26 to St. Pancras, 25 to Bethnal Green, 24 to Mile End Old Town, and 18 to Hackney sanitary districts. The Metropolitan Asylum Hospitals contained 232 small-pox patients at the end of May, against 56 and 129 at the end of the preceding two months; the weekly admissions averaged 60, against 13, 12, and 38 in the preceding three months. The prevalence of scarlet fever in London showed a slight decline from that recorded in the preceding month; this disease was proportionally most prevalent in Limehouse, Mile End Old Town, Poplar, Rotherhithe, Battersea, Wandsworth, Greenwich, and Woolwich sanitary districts. The Metropolitan Asylum Hospitals contained 2216 scarlet fever patients at the end of May, against 2139, 2070, and 2182 at the end of the preceding three months; the weekly admissions averaged 237, against 213 and 255 in the preceding two months. Diphtheria also showed slightly decreasing prevalence during the month under notice; among the various sanitary districts this disease showed the highest proportional prevalence in Islington, Bethnal Green, St. George-in-the-East, Mile End Old Town, Poplar, St. Saviour Southwark, and Battersea. There were 330 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of May, against 303, 307, and 316 at the end of the preceding three months; the weekly admissions averaged 67, against 64 and 67 in the preceding two months. The prevalence of enteric fever showed a very slight decline during last month; among the various sanitary districts this disease was proportionally most prevalent in Westminster, St. Giles, Clerkenwell, and Bethnal Green. Erysipelas showed the highest proportional prevalence in St. Luke, Shoreditch, Mile End Old Town, Poplar, Battersea, and Wandsworth sanitary districts. Three cases of puerperal fever were notified in Hackney, and 2 each in St. Pancras, Limehouse, Mile End Old Town, and Battersea sanitary districts.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary districts, the deaths occurring in the institutions of London having been distributed among the various sanitary districts in which the patients had previously resided. The distribution of these deaths, especially of those resulting from zymotic diseases, affords the most trustworthy data upon which to calculate reliable rates of mortality. During the four weeks ending Saturday, June 2nd, the deaths of 7061 persons belonging to London were registered, equal to an annual rate of 16·9 per 1000, against 19·8 and 18·4 in the preceding two months. The lowest death-rates during May in the various sanitary districts were 9·0 in Hampstead, 9·8 in Stoke Newington, 11·2 in Lee, 11·7 in Wandsworth, 11·8 in Plumstead, 11·9 in Lewisham (excluding Penge), 11·9 in St. James Westminster, and 13·6 in Paddington; the highest rates were 21·5 in St. Saviour Southwark, 22·6 in Mile End Old Town, 22·9 in Whitechapel, 23·3 in St. Olave Southwark, 24·1 in Limehouse, and 25·2 in St. George Southwark. During the five weeks of May 1496 deaths were referred to the principal zymotic diseases in London; of these, 764 resulted from measles, 250 from whooping-cough, 243 from diphtheria, 109 from scarlet fever, 61 from diarrhœa, 50 from enteric fever, 17 from small-pox, and 2 from ill-defined fever. These 1496 deaths were equal to an annual rate of 3·6 per 1000, against 2·5, 2·9, and 3·4 in the preceding three months. Among the various sanitary districts the lowest zymotic death-rates were recorded in St. Pancras, Stoke Newington, Holborn, Clerkenwell, St. Luke, Woolwich, and Lee; and the highest in Fulham, Bethnal Green, Limehouse, Mile End Old Town, St. Saviour Southwark, St. George Southwark, St. Olave Southwark, and Rotherhithe. Seventeen fatal cases of small-pox were registered in London during the month under notice, the corrected average number in the corresponding periods of the preceding ten years being 39; of these 17 deaths, 5 belonged to Poplar, 3 to Mile End Old Town, and 3 to St. Pancras sanitary areas. The 764 deaths referred to measles were more than double the corrected average number; among the various sanitary districts this disease showed the highest proportional fatality in Fulham, Bethnal Green, Limehouse, Mile End Old Town, St. Saviour Southwark

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON.—MAY, 1894.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1894.	Notified Cases of Infectious Disease.										Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,349,166	230	1850	1100	2	201	9	19	572	—	1933	9·6	17	764	109	243	250	—	50	2	61	1496	3·6	7061	16·9	122
West Districts.																										
Paddington	121,583	2	41	41	—	6	—	—	10	—	100	8·6	—	9	2	9	4	—	3	—	3	30	2·6	158	13·6	116
Kensington	167,350	1	24	20	—	4	—	—	15	—	64	4·0	—	26	—	6	6	—	1	—	—	39	2·4	266	16·6	186
Hammersmith	105,596	—	28	17	—	2	—	—	11	—	58	5·7	—	19	1	5	7	—	3	—	1	36	3·6	177	17·5	132
Fulham	110,993	3	57	24	—	3	—	1	16	—	94	8·6	—	41	—	9	12	—	—	—	3	65	6·1	193	18·6	167
Chelsea	99,052	2	39	21	1	2	—	—	17	—	82	8·6	—	24	2	7	7	—	—	—	3	43	4·5	164	17·3	91
St. George Hanover-square	75,033	3	29	16	—	5	—	—	5	—	68	9·5	—	10	1	2	2	—	—	—	1	16	2·2	110	15·3	130
Westminster	64,414	—	9	—	—	5	—	—	1	—	15	2·9	—	9	1	1	1	—	—	—	—	12	2·3	92	17·6	112
St. James Westminster	23,571	—	5	4	—	2	1	—	5	—	17	7·5	—	5	—	1	—	—	1	—	1	8	3·5	27	11·9	136
North Districts.																										
Marylebone	138,554	1	40	35	—	9	—	1	23	—	109	8·2	—	22	4	14	5	—	2	—	2	49	3·7	238	17·9	106
Hampstead	75,443	—	21	8	—	2	—	1	5	—	37	5·1	—	6	1	4	5	—	—	—	—	16	2·2	65	9·0	127
St. Pancras	239,739	26	104	39	1	8	1	2	39	—	220	9·8	3	11	4	8	15	—	1	—	1	43	1·9	399	17·6	119
Islington	331,940	32	155	119	—	13	—	1	38	—	358	11·2	1	51	9	24	30	—	2	—	3	120	3·8	488	15·3	157
Stoke Newington	34,172	1	12	9	—	2	—	—	2	—	26	7·9	—	—	1	1	1	—	—	—	—	3	0·9	32	9·8	54
Hackney	211,493	18	109	44	—	13	—	3	21	—	208	10·3	1	34	12	13	9	—	5	—	3	77	3·8	302	14·9	103
Central Districts.																										
St. Giles	38,144	3	7	—	—	5	—	—	4	—	19	5·2	1	5	—	—	3	—	2	—	—	11	3·0	72	19·7	130
St. Martin-in-the-Fields	13,783	—	6	1	—	—	—	—	1	—	8	6·1	—	4	—	—	1	—	—	—	—	5	3·8	23	17·4	136
Strand	23,179	4	7	2	—	—	—	—	1	—	14	6·3	—	2	—	—	2	—	1	—	—	5	2·2	36	16·2	150
Holborn	32,438	—	4	6	—	1	—	—	7	—	18	5·8	—	1	—	1	3	—	—	—	1	6	1·9	59	19·0	152
Clerkenwell	65,312	1	17	14	—	9	1	—	4	—	46	7·3	—	5	—	2	4	—	—	—	—	11	1·8	105	16·8	109
St. Luke	41,168	4	21	7	—	—	—	—	15	—	47	11·9	—	1	—	2	1	—	—	—	—	4	1·0	71	18·0	93
City of London	34,832	—	5	3	—	2	—	—	6	—	16	4·8	—	2	1	1	2	—	—	—	1	7	2·1	65	19·5	157
East Districts.																										
Shoreditch	123,186	6	46	27	—	2	—	—	20	—	101	8·6	—	18	4	6	11	—	1	—	2	42	3·6	236	20·0	152
Bethnal Green	129,840	25	58	56	—	15	—	—	18	—	172	13·8	—	41	1	15	8	—	1	—	3	69	5·5	261	21·0	136
Whitechapel	75,498	2	33	18	—	2	—	—	5	—	60	8·3	—	18	3	3	5	—	1	—	2	32	4·4	166	22·9	120
St. George-in-the-East	45,360	—	23	29	—	1	—	1	7	—	61	14·0	—	4	2	4	6	—	—	—	1	17	3·9	92	21·1	130
Limehouse	57,090	4	45	13	—	1	—	2	8	—	73	13·4	1	18	3	4	3	—	1	—	2	31	5·7	132	24·1	114
Mile End Old Town	108,242	24	56	45	—	2	—	2	18	—	147	14·2	3	40	5	10	8	—	1	1	5	73	7·0	235	22·6	136
Poplar	170,217	40	101	36	—	15	—	—	40	—	292	17·9	5	40	2	10	9	—	5	—	2	73	4·5	313	19·2	142
South Districts.																										
St. Saviour Southwark	26,712	—	13	12	—	1	—	—	2	—	28	10·9	—	12	1	4	1	—	—	—	1	19	7·4	55	21·5	200
St. George Southwark	60,060	3	31	16	—	4	—	—	6	—	60	10·4	—	23	—	6	2	—	1	—	1	33	5·7	145	25·2	120
Newington	118,512	3	36	23	—	4	—	—	11	—	77	6·8	—	48	1	—	4	—	2	—	3	58	5·1	242	21·3	167
St. Olave Southwark	12,984	—	2	1	—	—	—	—	1	—	4	3·2	—	6	2	—	1	—	—	—	1	10	8·0	29	23·3	161
Bermondsey	84,053	1	30	29	—	1	—	—	7	—	68	8·4	—	16	2	7	5	—	—	—	2	32	4·0	148	18·4	96
Rotherhithe	40,345	—	26	12	—	1	—	—	8	—	47	12·1	—	12	1	8	1	—	1	—	—	23	5·9	75	19·4	111
Lambeth	282,574	5	112	84	—	16	3	—	32	—	252	9·3	—	38	9	8	19	—	2	—	5	81	3·0	450	16·6	107
Battersea	161,558	—	98	55	—	9	—	2	35	—	199	12·8	—	51	4	14	6	—	1	1	1	78	5·0	258	16·7	140
Wandsworth	179,518	—	104	43	—	8	1	1	31	—	188	10·9	—	23	5	9	10	—	3	—	1	51	3·0	201	11·7	86
Camberwell	248,893	4	100	43	—	7	—	1	25	—	180	8·0	1	44	6	11	16	—	—	—	3	81	3·4	364	15·2	115
Greenwich	173,128	4	88	43	—	8	1	—	26	—	170	10·2	—	19	10	6	9	—	5	—	1	50	3·0	259	15·6	125
Lewisham (excluding Penge)	79,903	1	33	10	—	5	1	1	6	—	57	7·4	—	6	3	1	3	—	2	—	1	16	2·1	91	11·9	110
Woolwich	42,309	4	31	—	—	1	—	—	2	—	38	9·4	—	—	4	—	—	—	—	—	—	4	1·0	48	14·3	96
Lee	28,172	—	9	1	—	3	—	—	2	—	15	4·1	—	—	—	—	1	—	1	—	1	4	1·1	41	11·2	93
Plumstead	59,233	3	31	14	—	2	—	—	6	—	56	9·9	1	—	2	6	2	—	2	—	—	13	2·3	67	11·8	83
Port of London	—	—	4	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 81 cases of membranous croup.

† Including deaths from membranous croup.

St. George Southwark, Newington, Rotherhithe, and Battersea. The 109 fatal cases of scarlet fever were 25 above the corrected average number; this disease was proportionally most fatal in Hackney, Limehouse, Camberwell, and Lewisham sanitary districts. The 243 deaths referred to diphtheria were about double the corrected average; among the various sanitary districts this disease showed the highest proportional fatality in Paddington, Fulham, Marylebone, Mile End Old Town, St. Saviour Southwark, St. George Southwark, and Rotherhithe. The 250 fatal cases of whooping-cough were 82 below the corrected average; this disease was proportionally most fatal in Fulham, St. Pancras, Shoreditch, and St. George-in-the-East sanitary districts. The 50 deaths referred to enteric fever slightly exceeded the corrected average; there was no marked excess of fever mortality in any of the sanitary districts. The 61 fatal cases of diarrhœa were below the corrected average. In conclusion, it may be stated that the mortality in London during May from these principal zymotic diseases exceeded the average by more than 40 per cent., owing principally to the excessive fatality of measles and diphtheria.

Infant mortality in London during the month under notice, measured by the proportion of deaths under one year of age to registered births, was equal to 122 per 1000, and was slightly below the average; the lowest rates were recorded in Chelsea, Stoke Newington, St. Luke, Wandsworth, Lee, and Plumstead; and the highest rates in Kensington, Fulham, St. Pancras, City of London, St. Saviour Southwark, Newington, and St. Olave Southwark sanitary districts.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL G. J. H. EVATT, M.D., Q.U.I., having arrived at Netley as Registrar and Secretary to the Principal Medical Officer, has taken over charge of his duties from Surgeon-Major Pope. Surgeon-Captain W. Hallaran having been placed under orders for Ceylon, has been relieved of his duties at Netley by Surgeon-Captain G. Bent. Surgeon-Colonel Markey has been invalided to England from Madras, and Surgeon-Major Irvine has resumed his duties at Gibraltar. Surgeon-Captain Chevers has been granted leave from India, and Surgeon-Captain Josling has arrived in England on completion of a tour of service at the West Coast of Africa.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced: Surgeon-Lieutenant G. Bidie, I.M.S., Madras Establishment, Officiating Medical Officer, 1st Infantry, to be Medical Officer. Surgeon-Lieutenant-Colonel W. E. Johnson, M.D., I.M.S. (Madras), Medical Officer, Queen's Own Madras Sappers and Miners, to officiate as Residency Surgeon at Bangalore, in addition to his other duties until further orders. Brigade-Surgeon-Lieutenant-Colonel W. S. M. Price, A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel. Surgeon-Lieutenant-Colonel G. Price is appointed to act as Civil Surgeon of Murshidabad until further orders. Surgeon-Major J. Ffrench-Mullen is appointed to act as Civil Surgeon of Burdwan until further orders. The services of Surgeon-Major J. Clarke, Civil Surgeon of Nadia, are placed at the disposal of the Government of India in the Home Department. The services of Surgeon-Captain J. Chaytor White, M.D., I.M.S. (Bengal), are placed temporarily at the disposal of the Government of the North-West Provinces and Oudh, from date on which he may relinquish charge of his duties as Officiating Medical Officer of the Meywar Bhill Corps. The services of Surgeon-Captain H. M. Morris, I.M.S. (Bengal), are placed temporarily at the disposal of the Government of the Punjab. Surgeon-Colonel W. P. Warburton, I.M.S., Bengal Establishment, Principal Medical Officer and Sanitary Commissioner, Assam, is confirmed in that appointment.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff-Surgeons: Charles James, to Ascension Hospital, and John S. Lambert, to the *Alexandra*. Surgeons: F. A. Capps, to the *Waterwitch*, and Charles S. Woodwright, to the *Triton*. Surgeons and Agents: Vincent W. Twining, M.B., at Prawle, Salcombe, &c., and William J. Weldon, M.B., at Courtown and Ballymoney.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Arthur Breedon Wade, M.B., 3rd Volunteer Battalion, the Hampshire Regiment, to be Surgeon-Captain; Surgeon-Lieutenant Alexander James Boyd, M.D., 2nd Volunteer Battalion, the Bedfordshire Regiment, to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 3rd Kent (Royal Arsenal): Surgeon-Captain S. Davies, M.D., resigns his commission.—*Rifle:* 7th Middlesex (London Scottish): Joseph George Turner, Gent., to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Glasgow Company: John Binnie Mackenzie Anderson, M.B., to be Surgeon-Lieutenant.

DEATH IN THE SERVICES.

Brigade-Surgeon Gribbon, late of the Army Medical Staff, died at Bournemouth on the 12th inst. The deceased officer was attacked by influenza some months ago, which was followed by serious pulmonary disease.

THE ARMY ESTIMATES.

The House went into Committee of Supply on the 13th inst., resuming consideration of the Army Estimates. In the course of the debate which followed in connexion with the different votes, the main subjects touched upon were—the insufficiency of the provision for the adequate gymnastic and athletic training in the army, the need for more rifle ranges, the increased employment of non-commissioned officers and soldiers after they had left the service—on which a committee is to be appointed—the condition of the militia, the supply and character of the rations issued to soldiers, and other matters affecting the efficiency and well-being of the army. The most important question, however, directly bearing upon the health of the army arose in connexion with the great and increasing prevalence of venereal disease and the very grave amount of sickness and inefficiency attributable to this cause, especially among the troops in India and the West Indies and several other foreign stations. The War Minister said that the operation of the Contagious Diseases Acts had not experimentally proved an effective system in the reduction of this class of diseases, and that it was impossible to return to that system, which, indeed, could not be regarded as an effective check unless it were extended to the whole population. But we should like to know whether the amount of these diseases had not greatly increased in several foreign stations since the Acts had been abolished. That such has been the case is unquestionably the opinion of most people who are competent to form an opinion on the subject.

On June 6th forty-eight invalids arrived at Netley from Egypt by ss. *Rameses*, and eight invalids left Barbadoes on the 2nd inst. for conveyance to Netley.

Surgeon-Major Anthony Hickman Morgan, of the Army Medical Staff, has been appointed a Companion of the Distinguished Service Order, in recognition of his services during the recent operations on the West Coast of Africa.

A new Warrant has been issued to provide for the employment and pay of warrant and non-commissioned officers and men of the Medical Staff Corps as clerks in army medical offices.

ST. VINCENT'S HOSPITAL, DUBLIN.—At the recent sessional examinations the following prizes were awarded:—Senior Class: Bellingham Gold Medal: E. J. Moore. O'Ferrall Gold Medal: E. C. Hayes. Third Year's Class Prize: D. P. O'Brien. Junior Class: First prize, D. Kennedy.

MEDICAL DEFENCE UNION.—The President, Mr. Victor Horsley, F.R.S., and Dr. Bateman, one of the honorary secretaries, have promised to address the members residing in South Wales and Monmouthshire at Cardiff on June 28th.

METROPOLITAN HOSPITAL SUNDAY FUND, 1894.

THE following is a list of the subscriptions and offertories which have been received at the Mansion House and the Offices of THE LANCET up to the time of going to press. We are pleased to be able to announce that the total sum recorded up to the present time is £14,000. At the corresponding period last year the total was £12,000.

	£	s.	d.
St. Michael's, Chester-square (Rev. Canon Fleming, B.D.), (with addition)	1202	15	0
All Saints', Ennismore-gardens (Rev. Ravenscroft Stewart)	400	16	9
St. Paul's, Knightsbridge (Rev. H. M. Villiers)	385	18	3
St. Nicholas', Chislehurst (Rev. Canon Murray)	260	3	7
St. Ann's, Highgate Rise (Rev. C. T. Acland)	26	12	8
Metropolitan Tabernacle (Rev. Thomas Spurgeon)	132	0	0
St. Margaret's, Westminster (Ven. Archdeacon Farrar)	215	14	3
St. Augustine's, Queen's-gate (Rev. R. Chope) (with addition)	92	18	0
St. Saviour's, Clapham (Rev. C. P. Greene)	30	3	0
C. H. T. Hawkins, Esq. (a further)	21	0	0
St. Paul's Cathedral (Dean Gregory)	193	9	1
"Delta" (sixteenth contribution)	200	0	0
Christ Church, Highbury (Rev. W. J. Chapman)	84	2	4
Holy Trinity, Dartford (Rev. Percy E. Smith)	31	6	9
St. John Evangelist, Stanmore (Rev. F. C. Jackson)	39	9	4
The Oratory, South Kensington (Father Gordon)	28	5	0
J. J. Randolph, Esq. (a further)	25	0	0
St. Mary Aldermary, with St. Thomas the Apostle, and St. John the Baptist upon Walbrook (Rev. Lewis Borrett White, D.D.)	97	3	5
St. Michael's, Paddington (Rev. G. F. Prescott)	162	6	7
Upper Tooting Wesleyan Church (Rev. S. Weaver)	29	13	7
St. Mary's, Boltons (Rev. W. T. Du Boulay)	52	0	0
W. T. Blandford, Esq. (a further)	20	0	0
St. Mary Magdalene, Munster-square (Rev. F. J. Ponsonby)	41	13	0
Dutch Church, Austin Friars (Rev. A. D. Adama van Scheltema)	68	18	0
Christ Church, Turnham green (Rev. Percy J. Denavan)	20	7	6
St. Luke's, Redcliffe square (Rev. Evan Hopkins)	57	16	3
All Saints', Child's-hill (Rev. W. D. H. Petter)	25	3	9
St. Stephen's, Hampstead (Rev. J. Kirkman)	32	3	7
St. Luke's, Chelsea (Rev. Gerald Blunt)	53	5	1
St. James's, Muswell-hill	21	13	0
St. Mary's, Brookfield (Rev. T. J. Twemlow Cooke)	23	18	6
Holy Trinity, Lea (Rev. B. W. Bucke)	30	0	0
St. Andrew, Well-street (Rev. W. T. Holdsworth)	111	15	10
Christian Evidence Society (East London Branch)	28	0	0
Holy Trinity, Roehampton (Rev. R. Carrington)	71	10	1
St. Andrew, Leytonstone (Rev. M. Manning)	32	10	0
All Saints', West Dulwich (Rev. James Beeby)	25	0	0
St. Michael (Parish Church), Highgate (Rev. J. M. Andrews)	95	3	8
St. Thomas, Portman-square (Rev. R. D. Thompson)	82	17	0
Chislehurst Wesleyan Church (Rev. Samuel Gregory)	23	18	4
St. Andrew, South Streatham (Rev. W. C. G. Cubison)	32	12	5
Christ Church, Wanstead (Rev. N. Drummond)	23	10	11
Holy Trinity, Blackheath (Rev. S. F. Hooper)	33	0	6
St. Mary's, Graham-street (Rev. H. M. Villiers)	31	19	2
Holy Trinity Parish Church, Sydenham (Rev. Henry Stevens)	184	5	0
Greek Church of St. Sophia, Bayswater (the Archimandrite)	93	4	8
All Saints', Upper Norwood (Rev. J. Oakley Coles)	50	1	10
Thames Ditton Parish Church (Rev. E. H. Rogers)	24	10	0
Camden-road Presbyterian Church (Rev. R. M. Thornton)	26	15	8
St. Mark's Presbyterian Church, Greenwich (Rev. G. Elder)	27	14	7
Temple Church (Rev. Dr. Vaughan)	129	12	6
St. Peter's, Brockley (Rev. C. H. Grundy)	108	0	0
St. Stephen's, South Dulwich (Rev. F. E. White)	122	3	3
St. Saviour's, Paddington (Rev. M. Tweddell)	93	18	11
Hammersmith Parish Church (Prebendary Snowden)	34	2	5
Upper Holloway Baptist Chapel (Rev. J. R. Wood)	30	0	0
St. Thomas's, Clapton-common (Rev. F. W. Kingsford)	25	4	7
All Saints', Clapham-park (Rev. A. G. Girdlestone)	41	5	3
St. Gabriel's, Warwick-square (Rev. J. H. Ellison)	82	17	11
Highgate Presbyterian Church (Rev. A. Ramsay)	25	0	3
West Wickham Parish Church (Rev. H. Bertie Roberts)	37	7	10
St. John's, Red Hill (Rev. J. M. Gordon)	36	9	10
St. Matthew's, Brixton (Rev. N. A. Garland)	81	2	9
St. John's Presbyterian Church, Kensington (Rev. C. Moinet)	90	0	0
Brixton Hill Wesleyan Church (Rev. J. Stevenson)	45	1	3
Roupel Park Wesleyan Church (Rev. J. Stevenson)	21	0	1
Brixton Unitarian Church (Rev. J. Harwood)	55	1	6
St. John's, Sidcup, Kent (Rev. C. S. Woolmer)	22	3	1
Hendon Parish Church (Rev. Newton Mant)	30	3	11
St. Saviour's, Fitzroy-square (Rev. Thomas Turner)	41	18	6
St. Luke's, West Holloway (Rev. R. Glover)	44	3	1
St. Barnabas, Addison-road (Rev. G. R. Thornton)	117	9	7
St. James's, Kidbrook (Rev. J. C. Leeke)	196	15	9
St. German's, Blackheath (Rev. J. H. Greig)	41	14	6
St. Mark's, North Audley-street (J. W. Ayre)	85	18	0
Woodford Parish Church (Rev. A. Hughes)	20	0	0
St. Stephen's, Ealing (Rev. B. S. Tupholme)	64	11	0
Roslyn Hill Unitarian Chapel, Hampstead (Rev. Brooke Herford, B.D.)	102	0	0
Christ Church, Hampstead (Rev. G. F. Head)	204	7	10
Rectory-place Congregational Church, Woolwich (Rev. A. J. Viner)	26	0	0
Church of the Annunciation, Chislehurst (Rev. H. Lloyd Russell)	49	11	0
St. John's, Angell Town (Rev. Thomas Eykyn)	21	17	8
St. Paul's, Kilburn (Rev. Dr. Bonavia Hunt)	31	1	6
Abbeyhan Parish Church (Rev. A. T. Gibbs)	35	0	5
St. George's, Hanover-square (Rev. David Anderson)	111	11	4
Holy Trinity, Lyonsdown, Barnet (Rev. G. E. Gardner)	26	5	11
Corporation, City of London (a further)	105	0	0
Hampstead Parish Church (Rev. S. B. Burnaby)	51	14	9
Holy Trinity, Kilburn (Rev. S. Churchill)	36	2	8
St. George the Martyr, Southwark (Rev. T. Gage Gardiner)	20	0	6
Abney Congregational Church, Stoke Newington (Rev. J. Dixon Rutherford)	22	1	8
St. Peter's, Southwark (Rev. W. A. Corbett)	21	2	8
Finchley Parish Church (Rev. W. E. Batty)	31	17	5
Barry-road Wesleyan Church (Rev. J. H. Goodman)	30	0	0
St. James's, Holloway (Rev. E. Grose Hodge)	54	7	4
Eltham Parish Church (Rev. W. J. Sowerby)	22	13	0
Trinity Presbyterian Church, Streatham (Rev. Wm. Macphail, M.A.)	23	6	11
Bickley Parish Church and Mission (Rev. J. R. Wood)	54	8	10
Trinity Presbyterian Church, Notting Hill (Rev. Dr. Paterson)	40	0	0
Bromley Parish Church, Kent (Rev. A. G. Hellicar)	55	6	8
Holly Park Wesleyan Church (Rev. F. B. Cowl)	25	0	0
Presbyterian Mission, Kilburn (Rev. T. Finlayson Darroch)	21	1	6
Chapel Royal, Tower (Rev. E. F. Newman)	26	17	1
St. Philip's, Regent-street (Rev. Prebendary Harry Jones)	55	0	8
St. Mary's, Shortlands (Rev. F. Woolley)	37	16	8
Ewell Parish Church (Rev. J. Thornton)	27	1	0
St. Saviour's, Pimlico (Rev. Henry Washington)	55	14	3
South-street Baptist Chapel, Greenwich (Rev. C. Spurgeon)	21	12	9
Brixton Independent Church (Rev. B. J. Snell)	61	0	8
Clapton Park Congregational Church (Rev. Henry Harris)	35	9	10
St. Mary the Virgin, Primrose Hill (Rev. A. Spencer)	118	10	0
St. Philip's, Sydenham (Rev. A. E. King)	33	16	4
St. Paul's, Mill Hill (Rev. E. C. Lethbridge)	21	13	6
St. John-at-Hackney (Rev. F. E. Gardiner)	54	8	11
St. James's, Camberwell (Rev. J. Dixon Dyke)	28	13	0
Curzon Chapel, Mayfair (Rev. Filmer Bennett)	149	19	5
St. Andrew's, Holborn (Rev. H. Blunt)	21	16	0
National Secular Society, Finsbury-park Branch, per Miss Emily Robins	30	19	0
St. Mary Magdalen's, Enfield (Rev. G. P. Turner)	31	19	6
St. Saviour's, Ealing (Rev. N. Ranger)	31	8	6
Finsbury Park Wesleyan Chapel (Rev. J. Crabtree)	28	11	8
New Court Congregational Church, Tollington Park (Rev. W. Pierce)	28	2	4
Mrs. Burnaby (a further)	20	0	0
St. Mary's Parish Church, Stoke Newington (Rev. Prebendary Shelford)	64	12	6
St. Mary's Old Church, Stoke Newington (Rev. Prebendary Shelford)	37	19	9
Miss Emily Old (a further)	25	0	0
St. Giles's Parish Church, Camberwell (Rev. F. F. Kelly)	55	16	10
Alexander Miller	25	0	0
Major Jones (a further)	20	0	0
St. Paul's Presbyterian Church, Westbourne-grove (Dr. Morison)	71	10	0
Islington Presbyterian Church (Rev. W. H. Barlow, B.D.)	31	14	0
St. Philip's, Buckingham Palace-road (Rev. W. C. Gibb)	20	0	0
The Parish Church, Hornchurch (Rev. Robert Johnson)	9	7	5
St. Luke's, Bromley (Rev. R. J. Woodhouse)	21	12	10
Cold Harbour Vicarage, Holmwood (Rev. J. Rooker, jun.)	15	11	5
St. George's, Bickley, Kent (Rev. Robert Wood)	51	9	3
Widmore Mission Church (Rev. Robert Wood)	2	9	7
St. Mark's, Bromley (Rev. J. M. Tamplin)	28	12	2
The Parish Church, Crayford (Rev. J. P. Alcock)	16	9	0
Nutley-lane Church, Reigate (Rev. E. J. Baker)	12	9	6
Holy Trinity, Bromley (Rev. F. W. Haines)	12	0	0
Wallington Vicarage, Surrey (Rev. R. A. Boyle)	24	10	3
Emmanuel Church, Wimbledon (Rev. E. W. Moore)	76	11	10
All Saints, Chigwell-row (Rev. G. H. Hopkins)	7	1	8
The Parish Church, East Ham (Rev. J. H. Ware)	11	17	8
St. John Baptist Church (Rev. J. H. Ware)	7	0	0
Downs Baptist Chapel, Clapton (Rev. E. Medley)	38	1	9
Caius College Mission, Battersea (Rev. W. B. L. Hopkins)	7	2	11
All Hallows, Southwark (Rev. R. H. Duthy)	5	4	4
St. Jude's, Betanal-green (Rev. W. H. Davies)	5	15	3
St. George's, Beckenham, Kent (Rev. H. Arnott)	69	7	8
Morden College Chapel, Blackheath (Rev. H. Lansdell)	6	8	9
Forest-hill Congregational (Rev. E. S. Bayliffe)	5	0	0
St. Crispin's, Bermondsey (Rev. J. Wallace)	7	0	0
St. Paul's, Haringay (Rev. J. H. Greaves)	25	6	0
St. Andrew's, Haverstock-hill (Rev. G. C. Blaxland)	9	12	9
St. Saviour's, Brockley-hill (Rev. A. V. Russell)	18	9	11
St. Mary of the Angels, Bayswater (Rev. F. M. Wyndham)	14	12	0
All Saints', Friern Barnet (Rev. H. S. Miles)	35	14	2
Belgrave Presbyterian Church, Belgrave-square (per Mr. J. Milne)	11	13	6
Parish Church, Stapleton Abbotts (Rev. L. Tugwell)	6	5	2
Effra-road Chapel, Brixton (Rev. J. Harwood)	51	1	6
Christ Church, Warley, Essex (Rev. H. A. Raynes)	9	8	3
The Parish Church, Mitcham (Rev. D. F. Wilson)	59	4	5
St. Martin-in-the-Fields (Rev. J. F. Kitto)	175	7	4
The Parish Church, Northaw (Rev. E. B. B. Kitson)	10	6	6
St. John the Baptist, Islington (Rev. A. Morgan)	7	18	4
Christ Church, Sydenham (Rev. E. W. P. Keeling)	12	5	9
Green-lanes Wesleyan Chapel (per Mr. H. G. Cooper)	14	5	6
Christ Church, Westminster-bridge-road (Rev. F. B. Meyer)	25	7	7
St. Mary Magdalene, Peckham (Rev. T. Goss)	30	2	6
St. Paul's, Forest-hill (Rev. W. Klein)	66	0	0
The Parish Church, Merton (Rev. E. A. Kempson)	28	13	3
St. Mary's Mission Hall, Merton (Rev. E. A. Kempson)	5	0	0

Other amounts have been received and will be published in our next issue.

Correspondence.

"Audi alteram partem."

THE MALIGNANT TRANSFORMATION OF BENIGN LARYNGEAL TUMOURS AS A CONSEQUENCE OF ENDO-LARYNGEAL OPERATIONS: A CORRECTION.

To the Editors of THE LANCET.

SIRS,—I have to ask you to allow me space in your columns to correct a series of statements made regarding a case of mine quoted by Mr. Lennox Browne in an article on Deformities and Morbid Growths of the Larynx and Pharynx in "Burnett's System of Diseases of the Ear, Nose, and Throat," vol. ii., p. 769 After quoting, not quite accurately, several cases published by others than myself, Mr. Browne writes: "It was the knowledge of the after-history of these cases, as well as of one or two others of the same series, the details of which have not been published, that first awoke the writer's mind to the possibility of the conversion of benign into malignant growths, and, all of these occurring in the course of treatment, it was fair to assume that there was a *post* and *propter* relationship; in fact, the author is not aware of any case of laryngeal neoplasm in which this conversion has occurred in cases not submitted to operation nor of any method by which such degeneration, if it existed, could be definitely settled except by examination of removed portions." From this it is quite clear that what Mr. Browne desires to prove is that, as a consequence of endo-laryngeal manipulation, a benign growth may be converted into a malignant one. He seems to me to argue that such simple laryngeal growths as an adenoma or papilloma may be, by surgical interference, transformed into a malignant tumour. If his argument is accepted then it at once becomes apparent that endo-laryngeal operations should not be performed.

The question of the so-called "malignant transformation" is one of great scientific interest and of enormous practical importance, and one which may easily lead to a very wide discussion. It is not to discuss the general question that I now write, but to draw attention to the circumstance that Mr. Browne, in support of his own opinion that benign growths may become malignant as a consequence of surgical interference, quotes a case which I brought before the Clinical Society of London[1] for the purpose of showing "the danger of rapid extension of the carcinomatous disease as a consequence of partial removal." Mr. Browne describes in his article the same case as "very striking in the direct relationship between the operation and malignant transformation." I deny any such relationship. I published the case as one of cancer aggravated by endo-laryngeal manipulation and not as an example of simple adenoma undergoing "malignant transformation." I quite admit that Mr. Browne, or any other reader of my papers, has a perfect right to draw from them his own conclusions, however different they may be from my own, but while doing so I refuse to allow him or anyone else to alter the wording of my reports so as to suit their own ends. I may as well quote the case as published in your contemporary. It was reported as an "illustration of the danger of intra-laryngeal interference in *cancer* of the larynx."

"CASE 3.—A female aged fifty suffered from a tumour on the posterior third of the right vocal cord about the size of an orange seed. The tumour presented the appearance of an inflamed papilloma; the mucous membrane was deeply injected, and the history of the case favoured the diagnosis of papilloma. The patient had little or no discomfort or pain. There was no lymphatic involvement. Dr. Newman was then led to remove a small fragment of the growth, which presented the microscopic appearances of a papillomatous adenoma without the least suspicion of the structure of an epithelioma. Shortly after this he removed a larger portion. Following the second operation a diffuse swelling appeared in the neck, but seventeen days after this swelling subsided and revealed two enlarged lymphatic glands, one on either side of the thyroid cartilage. The subsequent course of the case proved then to be carcinomatous in their nature, and the growth within the larynx, which on examination of the first specimen was *believed* to be a papilloma, ultimately, on examination of subsequent specimens, *proved* to be an epithelioma, and the patient died from the disease."

In comparing Mr. Browne's quotation with my report, I find that in the last sentence for the word "believed" he has substituted the term "demonstrated," thereby altering my meaning entirely. Following this quotation he writes:—"The reporter, whose *exact* words have been quoted, deduces from this case the conclusion 'that, while conscious of the value of removing portions of a laryngeal neoplasm for diagnostic purposes, the proceeding should not be resorted to in cases suspected to be cancer, unless the patient is willing to have a radical operation performed immediately that the diagnosis has been thus completed.' But here was a case in which such completion of the diagnosis was supposed to have *demonstrated* the innocent nature of the growth, of which, moreover, on clinical grounds no doubt had been previously entertained."

How was the innocent nature of the growth demonstrated? I said that I believed from the history of the case and from the microscopic appearance of the "small fragment of the growth" that the tumour was a papillomatous adenoma when first seen; but I published the case with fuller knowledge, and in my report stated distinctly and advisedly that "the growth within the larynx, which on examination of the first specimen was *believed* (not *demonstrated*) to be papilloma, ultimately, on examination of subsequent specimens, *proved* to be an epithelioma." Mr. Browne himself admits[2] that, "apart from the tiny morsels of material upon which the histologist is usually expected to establish an unequivocal diagnosis, the microscopic features may themselves be conflicting even to a skilled pathologist." In this I agree with Mr. Browne, and the case that he has misquoted is one in point. Both as a histologist and as a clinical observer I have found that the cases which are obscure clinically also present equivocal structure under the microscope; therefore such cases are not instances upon which a theory should be based, or in any way supported; much less should they be used for the purpose of condemning operations of high value.

On page 768 Mr. Browne says, referring to some cases collected by Dr. Felix Semon: "He (Dr. Semon) concludes that if the operation had any appreciable influence in the modification of the neoplasm the proportions would be much more marked; but such an interpretation may be fallacious in two directions, first, because the record of a case is mostly determined by its result, and doubtless many which were primarily innocent were finally returned as malignant." As a footnote, following this sentence, he quotes: "Newman feels assured that if laryngologists were as careful to record their unsuccessful diagnosis as they are to bring forward their accurate ones it would be found that intra-laryngeal interference with malignant growths had shortened the lives of many sufferers." From the way in which this quotation is brought in the reader might naturally be led to believe that the opinion held by me is the same as that advanced by Mr. Browne. Indeed, on page 770 Mr. Browne says: "The fact remains that instances of the malignant conversion of each of these varieties of growths (within the larynx) have been admitted by Schnitzler, Seiler, Seifert, Solis, Cohen, Tauber, Wagner, Jarvis, Morelli, Blanc, and others, and to this list of more or less willing adherents to the author's conclusions must now be added the names of Felix Semon and David Newman." The points which I wish to insist upon are: first, that Mr. Browne has entirely failed to prove that a benign growth is likely to undergo malignant transformation as a consequence of intra-laryngeal interference; secondly, that he has no right to claim me as an adherent of the opinions expressed by him; and, thirdly, that the facts as *published by authors* are not consistent with the theory which he tries to demonstrate.

I am, Sirs, your obedient servant,

Woodside-place, Glasgow, May 14th, 1894. DAVID NEWMAN.

*** We regret that great pressure on our space and the length of Dr. Newman's letter have prevented us from giving it earlier publication.—ED. L.

[1] Brit. Med. Jour., Jan. 19th, 1889.

"THE ACTION OF ASPARAGUS ON THE KIDNEY."

To the Editors of THE LANCET.

SIRS,—Dr. Burney Yeo repeats in THE LANCET of June 2nd the statement that authors of works on therapeutics have

[2] Burnett's System, p. 768.

declared asparagus to be a diuretic, and the truth of this he attempts to establish by some fresh observations which he records. It was this generally accepted opinion which I attempted to refute and I do not consider that he has now corroborated it by the cases he has reported. Dr. Burney Yeo has done no more than declare that in a certain number of hours during which there have been several evacuations of the bladder the urine has not diminished, but frequently been increased in quantity after asparagus has been eaten at meals. If a large number of cases corroborate this I, of course, accept it, but even then my own statement may be correct. His observations cannot upset the fact related to me over and over again by patients and medical friends; their statements being too systematically clear and uniform, as to the inhibitory power of asparagus over the kidney, to be rejected. I have never intended to make precise and scientific statements. I have used the term "diuretic" in the popular sense only as when anyone after drinking certain mineral waters or beer declares that he passes more water. My patients did not take the specific gravity or make any note of the subsequent evacuations. I therefore offered no opinion as to the whole functionising action of the kidney, but spoke merely of diuresis in the popular sense of the term. The statement of my patients has been to this effect; that being aware of the customary time of micturition, after dinner, they had observed that after eating asparagus the usual hour was postponed and the amount of water much reduced in quantity. When I made inquiries on the subject in your journal some years ago, three replies came from medical men quite in accordance with the same declaration. Dr. Tidy said he had been investigating the subject with great care, and at least in four cases out of five asparagus had a marked inhibitory action on the kidney. "M.B. Cantab." wrote to say that the amount of urine was considerably diminished, accompanied by some irritation in micturition. "F.R.C.S." said that after two meals of asparagus the water was diminished to a third of the average. All the numerous statements made to me are so plain and so alike that they cannot be impugned. Idiosyncrasy might now and then account for difference of effect, but I believe there must be a tolerably uniform rule of action in the alkaloid of this vegetable as in all others. Dr. Burney Yeo's observations are interesting, but only show to me how soon the effect of the asparagus may pass off. If continuously and largely eaten this might not be the case. For example, a lady writes to me to say that she suffered from pain in the back and swelling of the ankles at a time when she was eating abundantly of asparagus. She observed that her urine was much diminished in quantity, but she continued to take the vegetable thinking it was wholesome. On hearing that its action as a diuretic was doubted, she immediately left it off. The flow of water was at once increased, and the pains in her back and legs left her. A friend who was travelling with her had also observed how in her own case the amount of water was diminished, again becoming natural in quantity on leaving off asparagus. Let Dr. Burney Yeo simply repeat my method. Inquire of reliable persons whether after eating asparagus for dinner they make water more speedily and more in quantity than usual, or whether the time of micturition is not deferred, and the quantity made less in amount. I have no doubt about the answer he will obtain. The quasi-scientific method of measuring the amount of water made in three or four evacuations during twenty-four hours or more in a person who has partaken of a small amount of the vegetable only tends to throw an obscurity over a very simple question.—I am, Sirs, your obedient servant,

Grosvenor-street, June 2nd, 1894. SAMUEL WILKS.

To the Editors of THE LANCET.

SIRS,—Dr. Burney Yeo's letter on the diuretic properties of asparagus is very interesting, and especially the experiments which he gives us. It has occurred to me that, after all, there may be a fallacy on both sides in the question. I find in my own case that after eating, not fifteen heads, but twice fifteen and probably more, my urine passed a few hours after (e.g., dinner at 7 P.M. and urine passed at 11 P.M.) is largely reduced in quantity and high-coloured, and this is invariably the case. Dr. Yeo does not give us the separate quantities passed within a few hours, but the day's total, and I think it is probably here that the error lies; for I have also noticed that the next morning I get a larger flow of urine than usual and of a more watery nature, and also quite pale in colour, thus making up for the previous deficiency; but as I have never measured it I cannot say if the total quantities would be in excess.

I am, Sirs, yours truly,

Winterbourne, Bristol, June 4th, 1894. REGINALD EAGER, M.D.

"THE RIGHTS OF MEDICAL PRACTITIONERS."

To the Editors of THE LANCET.

SIRS,—I have read with great interest the letters in THE LANCET of the last few weeks relating to the rights of medical practitioners and club fees. It has been my privilege to act as locum tenens to a number of medical practitioners in all parts of the kingdom, and thus I have come into contact with all kinds of practices. In the majority of these the medical man has clubs, the fees ranging between twopence and threepence a fortnight—a few (very few) fourpence and sixpence. I know of one instance where a medical man has a club, the members paying the small sum of a halfpenny a month. The result of this cheap practising is that the position of the medical man is lowered (because the profession is lowered), the patients in many cases looking upon him as a jobber and not as a member of an honourable profession. There is a tendency to "rush" the work, for the simple reason that it is impossible for a man to visit and treat thirty or forty cases in the day, whereas if there were fewer good paying patients he could give them the proper attention. I believe a great number of practitioners would be only too pleased to give up this cheap practising, if only their colleagues in the town and village would unite; but I have noticed that if one man refuses a club on cheap terms a neighbouring one will take it; thus the evil continues. There is always someone who will outbid the other. I know that many take the cheap clubs in order to make a living, on the principle that there is "safety in numbers"; but others, I am afraid, simply do it for no reason but that they do not respect themselves or their profession. I believe this pernicious and lowering system could be stopped if the authorities of the profession made a law compelling all practitioners to take nothing lower than a certain fee for clubs &c. I am of the same opinion as Mr. Pike—that if some of the heads of the profession spoke out boldly, like Mr. Bryant, the remedy would soon appear.

Believe me, Sirs, yours very truly,

A. WALDEGRAVE MITCHELL.

Wandsworth-common, S.W., June 2nd, 1894.

THE VACCINATION ACTS AND THEIR REFORMATION.

To the Editors of THE LANCET.

SIRS,—It is doubtful whether the new system of carrying out the Vaccination Acts advocated by Dr. Yarrow in THE LANCET of May 19th would prove as successful even as the one now in force. I quite agree with him when he says that vaccination is unpopular, but I fail to see any signs in this town of its *growing* unpopularity. The operation is not welcomed with cordiality by any class, and it never will be. Nine-tenths of the mothers, knowing it has to be performed sooner or later, submit with a good grace and get it over when their children are two or three months old. And here I should like to remark *en passant* that my experience of sixteen years has taught me that infants six weeks old "take" better and recover better than infants of twice that age. Mothers of large families have confirmed this statement in a very large number of instances. With respect to Dr. Yarrow's second assertion, that the bulk of the vaccination now performed is inefficient, I venture to say that the inspectors of the Local Government Board would not agree with it. Such a statement certainly needs proof. I cannot speak for the metropolis; but in the provincial towns I suppose quite two-thirds of the vaccination is performed by the public vaccinators. Of the remaining third it would not be too much to say that at least one-half is efficiently performed by conscientious practitioners, who believe in the operation being thoroughly well done. Of the remaining proportion I dare say, as far as protection goes, the children are not any the better off than if the operation had not been performed.

Dr. Yarrow must be sanguine, indeed, if he really believes that the public will, as it were, embrace the Vaccination Acts when the compulsory clauses are abolished. What advantage

would accrue to the parents if they had the advantage of having their children vaccinated by their own doctors free, gratis, and for nothing? The fact is, Sirs, mothers object to the operation and not to the operator. Once make the Vaccination Acts voluntary and you might as well repeal them altogether. In my humble judgment the whole of the vaccination of the country should be placed in the hands of officers who should be compelled to devote all their time to the duties. The public stations should exist as at present; but the number of public vaccinators would have to be reduced. People who preferred having their children vaccinated at home could do so by paying a stipulated fee. Arm-to-arm vaccination should be insisted on in all cases except where a preference was shown for calf lymph. Under this system all jealousy of public vaccination would cease to exist, and medical men would no longer be tempted to perform an important operation in an inefficient manner. As each public vaccinator would have a large district to work it would always be possible for him, even in remote country districts, to ensure that the vaccination should be from "arm to arm." Another very important matter could be dealt with, and that is the regular inspection of school-children. My experience in Cardiff tells me that in large schools quite 15 per cent. of the children are found with very imperfect marks—in short, are practically unprotected against small-pox. People migrate from town to town so often nowadays that it is practically impossible to trace them and it would therefore prove most beneficial if the Local Government Board gave orders for a house-to-house inspection periodically. Such an inspection can now only be done when an epidemic of small-pox has broken out. With regard to insusceptibility, I have vaccinated about 16,000 children, and up to the present time have had only once to certify that a child was insusceptible.

I am, Sirs, yours faithfully,

T. GARRETT HORDER, M.R.C.S., L.R.C.P. Edin.,
Cardiff, May 23rd, 1894. Public Vaccinator for Cardiff.

"CASE OF CONGENITAL SYPHILIS: INFECTION OF THE MOTHER BY HER OWN CHILD."

To the Editors of THE LANCET.

SIRS,—I think that Dr. Coutts has quite failed to prove that the case he related in your issue of the 9th inst. is an exception to Colles' law, for the following reasons:—1. The total want of evidence of any syphilitic infection in the father. I admit that this evidence is not necessary, but, taken with the other reasons, helps to give it weight. 2. Previous birth of four healthy children. 3. Failure of evidence to prove that the rash which the infant suffered from when three weeks old was due to hereditary syphilis. 4. Absence of proof that the symptoms which commenced last September were due to hereditary and not to early acquired syphilis.

The whole history of the case points to an early acquired infection, and in point of time, taking the appearance of the secondary symptoms in September as a guide, this infection took place about the time the child was vaccinated. I cannot admit that, because Dr. Coutts failed to find the primary sore, this is evidence of it never having existed. I am sure Dr. Coutts will pardon me criticising his case, as he has evidently reported it for this express purpose.

I am, Sirs, yours truly,

EDWARD COTTERELL.
West Halkin-street, Belgrave-square, S.W., June 11th, 1894.

THE DISPUTE BETWEEN MEDICAL MEN: BLOXHAM *v.* COLLIE, COLLIE *v.* BLOXHAM.

To the Editors of THE LANCET.

SIRS,—Inasmuch as the reports of the termination of these actions which have appeared in the Press are so meagre, I shall be glad if, on behalf of my client, Dr. Bloxham, you will permit me to give the following explanation. In the action brought by Dr. Collie he sought to restrain Dr. Bloxham from practising within a radius of three miles of Catford, and to recover a penalty of £100 a month from August, 1893, and to recover damages in addition thereto. In the action brought by Dr. Bloxham he sought to recover damages from Dr. Collie for the breach by the latter of an agreement alleged to have been entered into whereby Dr. Bloxham was to have been admitted into partnership with Dr. Collie from Jan. 1st, 1894, Dr. Bloxham to receive one-fourth of the net profits of the practice. To this claim Dr. Collie counterclaimed £81 14*s.* 6*d.*, with interest at 7½ per cent. from May 1st, 1893. Upon the two actions coming before Mr. Justice Hawkins the following order was by consent made: "A juror withdrawn; all imputations of professional misconduct mutually withdrawn, Dr. Bloxham undertaking not to practise within three miles of Dr. Collie's present residence for ten years; the counterclaim of Dr. Collie abandoned, and no costs to be taxed or paid on either side. The sum of £20 16*s.* 8*d.* paid into court by Dr. Collie to be received by Dr. Bloxham."

I am, Sirs, your obedient servant,

THOS. J. SAVAGE,
Ludgate-hill, June 6th, 1894. Solicitor for Dr. Bloxham.

*** We are happy to give publicity to Mr. Savage's letter, but we may be allowed to point out that as long ago as June 2nd we announced the result of these actions in almost identical words in our columns.—ED. L.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Water-supply.

THE Newcastle and Gateshead Water Company have now completed the erection, at their Wylam station, of two pairs of pumping engines to deliver 3,000,000 gallons of water per day. The pumps are of the direct-acting horizontal type, and, by an ingenious mechanical contrivance, are arranged so that each pair can be worked simultaneously, or any single pump independently of its neighbour. The well-known "duplex" motion has thus been embodied, ensuring a continuous flow of water, with the additional advantage that either single pump can be worked alone, when desirable. These pumps, which are now at work, are said to be pumping water for trade purposes only, but thoughtful people look upon the pumping of Tyne water with some uneasiness, although, thanks to the late rains, there is at the present time a stock sufficient for many months in the reservoirs.

The Recent Outbreak of Typhoid Fever at Shildon.

The late serious outbreak of typhoid fever at Shildon, concerning which the Home Office sent down a medical expert, has been made the subject of an exhaustive report, which has just been received by the Shildon Local Board. Its purport is that the water-supply was not responsible for the epidemic. In the inspector's opinion the outbreak was principally due to defective sanitary arrangements, while milk had been to some extent a contributory cause.

Insurance of Infants.

At an inquest at Gateshead the other day, it transpired that the child's life was insured, and, in reply to the coroner, the mother made the strange admission that on the same day the child was born an insurance agent called at the house and asked her to take out a policy on the child's life. The coroner commented on the keenness of the competition which must exist among insurance companies when they canvassed for policies so soon after a birth. A case has been mentioned in which an insurance agent "booked" a babe before it was born. It needs but little prescience or experience to see where these business aptitudes might lead.

St. John Ambulance Association.

Surgeon-Captain George Middlemiss, M.D., of Darlington, has been selected for enrolment as an honorary associate of the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England, in recognition of services rendered, and the selection has received the sanction and approval of the Queen, the patron of the order. Surgeon-Major Hutton has inspected a class of railway employees at Gateshead and expressed satisfaction with the efficient instruction they had received from Mr. Abraham.

Middleton St. George Convalescent Home.

The Middleton St. George Convalescent Home will be opened on the 16th inst. for men, women, and children. The new institution is established for the benefit of the workmen and the poor of Teeside and Cleveland.

Sunderland Infirmary and its Convalescent Home.

A deputation from the Sunderland Infirmary has just held an interview with the Ecclesiastical Commissioners in London for the purpose of securing their help towards the erection of a wing for the treatment of male patients at the Heatherdene Home, Harrogate, which is an adjunct of the Sunderland Infirmary. The deputation submitted a memorial to the Ecclesiastical Commissioners signed by 4126 miners employed at various collieries in the Sunderland district, from which the Commissioners draw royalty rents, &c., and from which collieries numbers of accident cases are annually treated at the Sunderland Infirmary. The Commissioners favourably entertained the application, and intimated that they would give £1000 towards the fund.

A case of small-pox is reported at Leyburn and also one in the Heaton district of this city.

Newcastle-on-Tyne, June 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Leith and the Notification Act.

THE Leith Town Council has at last seen the error of its ways and adopted the compulsory notification of infectious diseases. They and their neighbours in Edinburgh are to be congratulated on this step, and it may be hoped that the action of the authorities may not stop here. There is an element in the town council which would probably be pleased if notification proved of comparatively little value, and it will devolve upon those impressed with the necessity for strong action to see that notification is followed up by action sufficiently thorough to arrest the spread of small-pox and to stamp it out. The Public Health Committee of the town council has been instructed to inquire into the whole working of the sanitary arrangements in the burgh, and their report will be awaited with anxiety.

Annual Picnic of the Glasgow Eastern Medical Society.

The annual picnic of the Glasgow Eastern Medical Society took place on Friday, June 1st, on the most charming of summer days. The outing took the form of a Hunterian pilgrimage, first to the parish church graveyard of East Kilbride, where the family burial place of the Hunters was visited, and the inscription on the flat tombstone was deciphered by the President, Dr. Mather, who has done so much in every way to make us appreciate and feel grateful to these two great Scotsmen, William and John Hunter. Thence the members were driven to Long Calderwood, the birthplace of the Hunters, on a rising gradient, amidst woodland and pastoral scenery of the most charming description. At the house the party was photographed as a souvenir of the occasion.

June 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Royal Medical Benevolent Fund Society.

THE annual meeting of this society was held last week, and was presided over by Dr. W. G. Smith, president of the Royal College of Physicians. The total amount given in grants during the year was £1216. Eighty-three applications for aid were considered during the year—3 from medical men, 68 from widows, and 12 from orphans. Among all the 83 applicants for relief, in only 20 instances had the medical man directly or indirectly concerned contributed to the society's funds, a want of *esprit de corps* among members of the medical profession which is much to be deplored. The report stated that the branches throughout the country were, for the most part, discouraging. Apathy influenced apparently a large proportion of the medical men in Ireland, for but a small fraction of the whole number of medical practitioners subscribed anything to the fund. Eight counties did not send in any contribution to its funds, so that the society, contributed to in many cases by the better-off members of the profession, had subsidised many who did not raise a finger to help themselves, and it was a question for the society to consider whether that should continue. The expenses of management were 11·4 per cent., which appears excessively high for a charitable organisation.

Carlow Lunatic Asylum.

There is a vacancy for an assistant medical officer to this asylum, and although three elections have been held, no appointment has been made. Elections have been respectively held in April, May, and June, but the voting on the three occasions has been equal. There have been but two candidates belonging to different religions, and, therefore, the contest has been fought with the greatest pertinacity. On one of the occasions above named the chairman gave a casting vote for his co-religionist, but an objection was lodged and afterwards disallowed by the Board of Control, who ordered a fresh election. Probably if the matter were left to arbitration the difficulty might be solved.

The Treatment of Convict Prisoners.

The *Dublin Gazette* contains a new schedule of rules for the treatment of convict prisoners in Ireland. Minute particulars regarding the identification of the convicts must be at once recorded, and photographs of the prisoners taken from time to time. Any gratuity granted to a convict on his discharge may be paid through a prisoners' aid society. Strict injunctions are given as to proper attention by medical officers, and the supply of a sufficient quantity of wholesome food according to scale. Each prisoner shall take a bath on reception. Provision is made to consider complaints by prisoners, employment of convicts, and due attention to religious and secular instruction. An officer shall not speak to a prisoner unnecessarily, nor shall he by word, gesture, or demeanour do anything which may tend to irritate a prisoner under his charge. In no case shall he strike a prisoner, except in self-defence. Corporal punishment in the case of a prisoner over eighteen years of age shall be inflicted either with a cat-o'-nine-tails or a birch rod, and in the case of a prisoner under eighteen years with a birch rod. Neither dietary nor corporal punishment can be inflicted without the certificate of the medical officer that the convict is in a fit condition of health to undergo such punishment.

It is stated that Mr. Sellars, L.R.C.P.I., &c., of Dundalk has been elected coroner for North Louth.

June 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

What is Castoreum?

MM. BEAUREGARD and PILLIET[1] have recently studied the structure of the perfume glands of the beaver, and they find that the accepted notions copied from text-book to text-book require modification. It appears that these glands are simply globular extensions of the preputial membrane, the epithelium of which forms innumerable villi in the interior of the sac. These villi are themselves covered with smaller projections, which afford, in their turn, support for still smaller ones, a papillary structure being the result. The secretion—castor—is constituted by the shedding of stratified pavement epithelium. Castoreum is hence only the preputial smegma of the castor fiber, or beaver.

The Germ of Concomitant Broncho-pneumonia and Hæmorrhagic Pleurisy.

Professor Berlioz of Grenoble claims to have discovered in the blood, spleen, and liver of a man who died at the Grenoble Hospital the specific micro-organism of the above disease. It is a rod-shaped bacillus from four to six μ long by one μ broad. In culture media the bacillus lengthens after a few days and ovoid spores develop. Some of the organisms are constricted in the middle. Both bacilli and spores are motionless; they are easily stained by any aniline colours, especially gentian violet. They resist bleaching by Gram's method; they grow rapidly in every culture medium and liquefy gelatine. The cultures on agar-agar are creamy; in bouillon they yield a viscid deposit. The bacillus is endowed with great vitality, a culture aged one year growing well. Its resistance to antiseptic agents is marked. The bacteridia of anthrax ceased to grow in bouillon to which was added 0·04 per 1000 of microcidine, whereas the pneumobacillus of Berlioz continued to flourish in bouillon impregnated with the same antiseptic to the extent of 0·14 per 1000. The guinea-pig inoculated with the bacillus dies in from

[1] Société de Biologie, June 2nd.

four to six hours, patches of broncho-pneumonia and hæmorrhagic pleurisy being the lesions discovered post mortem. The micro-organism was discovered in the blood, liver, and spleen. Attempts at protective inoculation yielded no satisfactory results.

The Action of certain Poisonous Substances on the Embryo of the Fowl.

M. Féré has been engaged for some time past in researches on this interesting subject. He has, in preceding communications, shown that fowls' eggs, into the albumen of which substances such as essences, alcohol, ether, &c., had been injected, produced when submitted to the incubatory process either no embryo or in a great number of instances yielded monsters. A similar teratogenous influence was found to appertain to certain physical agencies, such as vibrations, brought to bear on the egg. M. Féré was able to demonstrate the interesting fact that these physical agents, very powerful during the early hours of incubation, became nearly powerless after forty-eight hours. Wishing to see if advanced incubation imparted a similar resisting power with regard to alcohol and other chemical agents, M. Féré found that fewer monsters were hatched when the injection was practised after twenty-four or forty-eight hours; but, strangely enough, when the injection was delayed till after the seventy-second or ninety-sixth hour of incubation the embryo invariably died. Physical agencies employed at the corresponding period of incubation also killed the embryo. There is thus a period in the development of the embryo when toxic and physical agents, which at an earlier period determine the ultimate hatching of monsters, bring about the death of the embryo. The true explanation of the phenomenon is probably that already given by Claude Bernard—viz, that it coincides with a certain degree of development of the nervous system which at that moment presents the highest vulnerability when subjected to the influence of external physical or chemical agents.

Academy of Sciences.

On the 3rd inst. the members of this learned corporation foregathered in order to elect a successor to the *fauteuil* occupied with such distinction by the late regretted Professor Brown-Séquard. Five candidates presented themselves for this coveted honour—viz., MM. d'Arsonval, Ollier (of Lyons), Charles Richet, Dastre, and Franck. The voting was close, as may be seen from the figures given below:—

	First Ballot.	Second Ballot.
d'Arsonval	20 votes	31 votes (elected).
Ollier	18 ,,	23 ,,
Richet	9 ,,	3 ,,
Dastre	8 ,,	2 ,,
Franck	4 ,,	1 ,,

Dr. d'Arsonval, the new Academician, will be doubtless well known to your readers from his having collaborated for many years with Dr. Brown-Séquard in his researches on the method of treatment associated with the name of the last-mentioned *savant*.

June 12th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Cholera Epidemic in Russia.

THE exact course of the cholera epidemic in Russia during the first four months of the present year has been as follows: In January the disease was present in the governments of Volhynia, Kovno, Kursk, St. Petersburg, Tambof, Tchernigof, the Polish governments of Warsaw, Radom, and Ploçk, and the Caucasian governments of Stavropol and Erivan. In none of these was it severe. St. Petersburg suffered the most, the city itself furnishing 172 cases of cholera and 89 deaths during the month. In February cholera disappeared from both the city and government of St. Petersburg and from most of the other governments named. In those of Kovno, Ploçk, and Tchernigof, however, it still lingered on, but the numbers of persons attacked by cholera was so small that after the 18th of the month[1] the Government decided to publish monthly instead of weekly returns. Early in March cholera reappeared in the city of Warsaw. Late in the month it broke out again in Podolia and in Radom. The disease still remained in Kovno and Ploçk. In April no new districts were attacked, but cholera was more or less active in the five governments in which it was present in February. The government of Radom has returned the highest numbers. In that district there were, between March 25th and April 23rd, 140 cases of cholera, causing 66 deaths. In the others, between April 10th and 23rd, there were, in the government of Ploçk, 69 cases with 20 deaths, in that of Radom 120 cases and 56 deaths, while in that of Podolia there were between April 11th and 27th 53 cases of cholera with 15 deaths. In the city of Warsaw there occurred between April 10th and 23rd 4 cases of cholera, 2 of which were fatal.

Human Sacrifices.

A highly interesting discussion recently took place at the Anthropological Society of the Army Medical Academy in St. Petersburg upon the subject of "Human Sacrifices." A paper with this title was read by Professor Ivanovski, who stated that a few years ago a legal case arose, in which the Votiak inhabitants of a certain place in one of the north-eastern governments of Russia were charged with murdering a peasant from a neighbouring village in order to obtain the internal organs for use at some pagan sacrifice. The head had been cut off, and was, in fact, never found; the upper part of the spinal column and parts of the upper ribs attached to it had been removed, and through this opening the whole of the contents of the thorax had been extracted. It appears that there are three forms of animal-sacrifice among the Votiaks: (1) private ones at certain times of the year, when some small animal or bird is killed; (2) public ones, on some great holiday, when a large animal is put to death; (3) exceptional occasions, such as the occurrence of some great disaster, a famine, or epidemic. On these occasions it may be an animal, or it may be a human being that the "jretz" (or heathen priest) selects as a suitable sacrifice to the gods. Under the present conditions of police supervision, extending even to the remotest places, such an event as the sacrifice of a human being is, of course, very rare; but the reader of the paper brought forward complete proof that it has occurred within recent times. In 1877 at the Archæological Congress held in Kazan, Mr. Soloveif discussed this question, and the occurrence of such incidents was fully confirmed by Mr. Smirnof, who pointed to certain persons then living who had actually been condemned to be sacrificed, but had succeeded in escaping. It seems, then, that there can be no doubt that there exists in Europe at the present moment a race part of whose creed does not exclude the murder of a human being to appease those evil spirits to whom all misfortunes are ascribed. That this is so need not cause any surprise. Gross superstitions are to be found all over the world, and it is not a very great step from the belief that epidemics and famines are the outward and visible signs of the anger of some offended evil spirit to the belief that the voluntary sacrifice of a living human being will appease the spirit's anger, and cause him or her (for the spirit is sometimes a female one) to check the further course of the particular misfortune. The Votiaks are a Finnish race, said to number some 250,000, and living in the eastern part of the government of Viatka. Only a small number of them have embraced Christianity. But the Paganism or Christianity of the persons holding such superstitions scarcely enters into the question. As Professor Ivanovski pointed out, in the Government of Minsk in 1855, an old woman was buried alive in order to check the cholera epidemic then raging. He might have quoted a case much nearer the present day. In 1892 in Polovinnaia, in the Government of Tomsk, the inhabitants were most desirous of killing a healthy man in order to appease the cholera, and every night they went round the village firing guns in order to "kill the cholera," which was supposed to be a woman with buckets in her hands. In Biélova in the same government the peasants searched everywhere to find the witch who had allowed cholera to come to their village. At last a shepherd promised to find what they wanted, and he named an old woman who had, however, recently died from cholera. The wretched panic-maddened peasants dug up the corpse and imagined they saw in its mouth a cross. They wreaked their vengeance on the body by all sorts of mutilations, and then buried it again. The only result was that cholera spread worse than ever. The story is not without its ludicrous side in the fact

[1] All the dates mentioned are Old Style dates.

that the peasants, finding they had been deluded, "beat the shepherd to a jelly," and sent him bound to the *volost* authorities. The main point of the incident is that there can be little doubt that, had the shepherd named a living instead of a dead person, the person would have been killed to appease the cholera.[2]

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Typhoid Fever in Victoria.

THE number of cases of typhoid fever reported lately in Victoria has been gradually decreasing, but some peculiar isolated outbreaks have occurred. Thus, at a small, thinly populated country township called Bullarto over forty cases occurred, over twenty being reported in one day. Another recent outbreak was confined to a block of houses at Footscray, a suburb of Melbourne, and in investigating its causation a rather amusing episode took place. The local health officer reported that the premises had been carefully inspected and no sanitary defects could be discovered, but an examination of three samples of water taken from fire-plugs in the locality showed that the water contained an enormous quantity of solid residuum, which he characterised as "sewage mud." His report was forwarded to the Metropolitan Board of Works, which made some investigations, and then invited the chairman and medical inspector of the Board of Health and the local health officer to visit the locality in company with the chairman of the Board of Works and the engineer of water-supply. The results of the inspection did not seem to bear out the report of the medical officer of health.

The First Epidemic of Measles in Samoa.

Mr. S. H. Davies, medical missionary at Savaii, in Samoa, contributes to the April number of the *Australasian Medical Gazette* some notes on the introduction of measles into that group. The disease, he states, was brought there for the first time in August last by the New Zealand steamer *Upolu*. The invasion was mild, but Mr. Davies estimates that not one of the entire native population of 34,500 escaped infection, while probably not less than 1000 died, half of whom were adults, though, owing to the distances between the different islands constituting the group, it is difficult to get exact statistics. Probably 200 have died since from sequelæ, such as diarrhœa, respiratory troubles, and glandular affections. Many of the deaths were due to the refusal of the natives to follow advice and take proper diet.

Sydney Hospital.

At a recent meeting of the directors of the Sydney Hospital Dr. Thomas Fiaschi was elected hon. surgeon. Some objection has been taken to the appointment on the ground that Dr. Fiaschi is an M.D. of Pisa University, which is not recognised by Sydney and British Universities. On professional grounds no exception could be taken, as Dr. Fiaschi is one of the leading surgeons in Sydney. At the same meeting Dr. E. J. Jenkins was elected hon. physician, and Dr. Odillo Maher hon. ophthalmic surgeon. Dr. Corlette was appointed senior house surgeon. The architect announced that the new hospital building would be ready for occupation by May 1st. It was proposed that a bust of Sir George Dibbs should be placed in the vestibule of the new building, in recognition of his services in procuring the money for its erection, but the proposal was withdrawn. Probably one of the wards will be named the "Dibbs Ward."

Women as Resident Medical Officers in General Hospitals.

Both in Sydney and Melbourne, women have acted as resident medical officers, but hitherto only at special hospitals for diseases of women. Now a woman holds a similar position in a general hospital, Miss Amy Castilla, M.B., Melb., having been recently appointed resident medical officer to St. Vincent's Hospital, Melbourne. At the annual election of resident officers at the Melbourne Hospital, just held, another woman, Miss Emily Page Stone, was a candidate, and being second in the final honour lists of the Melbourne University ought, according to the rules, to have been elected. The rule further states, however, that the candidate must have been a student at the hospital, and, as Miss Stone had done her clinical work at the Alfred Hospital, she was declared ineligible. The question of appointing women as residents will have to be faced, however, as the women students are now doing their work at the Melbourne Hospital, and the committee will have to decide definitely whether they are eligible or not as resident medical officers.

A Case of Suppuration in the Lesser Peritoneum.

At the last meeting of the Queensland Medical Association Dr. E. S. Jackson recorded a case which he regards as one of suppuration in the lesser sac of the peritoneum. The symptoms began with diarrhœa, epigastric pain, vomiting, and retching. During an attack of severe vomiting the patient brought up a quantity of offensive pus, and had temporary relief from her symptoms. Then high fever, rigors, pain in the left hypochondrium, and slight jaundice set in. Aspiration over the spleen revealed pus, and an incision made between the ribs in this region evacuated a quantity of fæcal-smelling pus from a ragged cavity lying between the spleen and the diaphragm. The patient died in a few days, but unfortunately no necropsy could be obtained.

Treatment of Severe and Relapsed Cases of Club-foot.

At the last meeting of the Medical Society of Victoria Dr. W. Moore read a paper on the Treatment of Severe Cases of Club-foot, in which, after reviewing the various operative procedures adopted, he strongly advocated the mode of treatment introduced by Mr. T. N. FitzGerald of Melbourne, consisting of subcutaneous division of tendons, plantar fascia and ligaments at the inner side of the foot, breaking up the tarsal bones with a rounded chisel and forcible rectification of the foot by a lever. In cases with marked inward rotation of the whole limb Dr. Moore advocated the addition to this operation practised by Mr. Syme, consisting in the division of the bones of the leg or of the femur and rotation of the limb outwards. Patients were exhibited on whom these operations had been performed, and almost everyone who took part in the discussion admitted that these patients walked perfectly. It is strange, as Dr. Moore remarked, that an operation which gives such good results should be so completely ignored by orthopædic and other surgeons and be hardly practised outside Melbourne.

An Extra-uterine Fœtation of Fourteen Years' Duration.

Mr. E. Matthews Owens of Brisbane records a case in which he performed laparotomy for an obscure abdominal tumour which had existed for over fourteen years, and which proved to be a fœtus of about five months, fairly well preserved, and enclosed in a well-defined but thin sac. In 1879 the patient missed three menstrual periods and thought herself pregnant; but as time went on and she did not increase in size concluded she was mistaken.

Crypto-Lithiasis.

Under the above rather misleading title Dr. Donald Cameron read before the last meeting of the Victorian branch of the British Medical Association an interesting paper on Tumours of the Skin and Subcutaneous Tissue which undergo Calcification and Ossification. Details were given of original investigation of four cases of calcification of the subcutaneous fatty tissue In three of these the process was circumscribed, in the other there was a diffuse calcification in the subcutaneous tissue covering the tuber ischii. Microscopic examination showed that the skin was slightly atrophied; the subcutaneous fat was in a state of atrophy, and embedded in it were the calcified nodules, each corresponding to an individual fat lobule, and surrounded by a capsule of dense fibrous tissue. The contents consisted of groups of fat cells, mostly empty, but a few containing a homogeneous mass staining deeply. The groups of fat cells were separated by areas of detritus. Dr. Cameron considered the process to be allied to the circumscribed necrosis found in the inter-acinous tissue of the pancreas. Other forms of subcutaneous calcification described were of simple dermoids, of papillomatous dermoids of skin-follicle cysts, of molluscum contagiosum, of the contents of blood-vascular and of lymph-vascular spaces, and ossification of scar tissue.

Poisoning by the Platypus.

The platypus (*ornithorrynchus anatinus*) has always been a most interesting animal, occupying as it does an intermediate position between reptiles, birds, and mammals; on the hind limb of the male is a hollow curved spur communicating with a gland in the leg in much the same way as the poison fang of a snake is connected with the poison-producing salivary gland. At the last meeting of the Victorian Branch of the

[2] These incidents are quoted from the Report upon the Cholera Epidemic in the Government of Tomsk in 1892, by Dr. Elantzef. Tomsk, 1893.

British Medical Association Dr. Lalor made a preliminary communication suggestive of the fact that the gland of the platypus also secretes poison. He narrated the case of a man who was wounded in the hand by this spur of the platypus and felt stung. Cellulitis of the arm followed, and acute blood-poisoning. The subject is to be further investigated, but of course it is quite possible that the symptoms can be accounted for by the inoculation of a simple wound with the ordinary micro-organisms of septicæmia.

Obituary.

ROBERT JOLLY, M.D., F.R.C.S. EDIN.

ON the 9th inst., at Bournemouth, aged fifty-one years, Dr. Jolly, Senior Surgeon to the General Hospital, Birmingham, passed away, after an illness of some months' duration. In 1862 Dr. Jolly graduated at Edinburgh, where he was Demonstrator of Anatomy at the Royal College of Surgeons. After this he went to Birmingham as House Surgeon to the Queen's Hospital, and in 1870 was elected Surgeon to the General Hospital and lecturer on Anatomy at Queen's College. His professional work was always done with ability and patient steadiness of purpose, while a large general practice greatly augmented the strain thrown upon his powers and deprived him of leisure to cultivate any reserve of strength. Thus, like many hard-working practitioners, he drew a bill upon the future and when the time came succumbed to the realisation of this in failure of health. Quiet and reserved in manner, he displayed caution and self-command in his duties. An able surgeon and safe operator, a careful practitioner, he devoted his life to the work which lay before him with indefatigable and constant attention. Dr. Jolly, as Surgeon to the police force, as Consulting Surgeon to the General Dispensary, and as Surgeon to the General Hospital, found his time too fully occupied to take any part in the recorded work of his profession, nor did he take any active interest in the professional societies of the town. Absorbed in his immediate occupations he toiled with his daily routine until it got the mastery over him. Seeking to obtain relief, he went to Bournemouth with the hope of returning to the town of his adoption at no distant date; but, unfortunately, he suffered a relapse and died away from his own home.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Grosser, formerly Professor in the University of Breslau, at the age of seventy-four. He was at first assistant in the obstetric clinic under Betschler, but afterwards devoted himself to anatomical and histological work, being appointed prosector and extraordinary professor. He retired in 1874, but continued to work at his microscope until a few years ago, when his sight began to fail.—Dr. Kutsche, Sanitary Privy Councillor of Glatz.—Dr. Weber, Sanitary Privy Councillor of Nieheim.

Medical News.

DR. WEST SYMES of Halifax has been elected an Honorary Associate of the Order of St. John of Jerusalem in England, in recognition of his services in connexion with the St. John Ambulance Association.

LADY FORRESTER of Shropshire has left the sum of £200,000 to erect and endow a convalescent home at the seaside for natives of that county. The home is to be erected at Llandudno at an outlay of £30,000.

POPLAR HOSPITAL FOR ACCIDENTS: OPENING CEREMONY.—On Monday, June 11th, the Prince and Princess of Wales, accompanied by the Princesses Victoria and Maud of Wales, the Duke of York, and the Archbishop of Canterbury, opened the new buildings of the Poplar Hospital for Accidents, Blackwall. On July 1st, 1893, the old hospital was vacated and the building, which had served as a hospital for thirty-eight years, was handed over to the builders to adapt for its new uses—namely, the accommodation of the increased staff and the isolated patients. The work is now complete. Mr. A. F. Hills, president of the hospital, read a statement in which he announced that a sum of £30,000 had been subscribed during the past three years, and that the hospital would now be able to deal with all accidents arising in its crowded East-end district. At present three accidents for every hour of the day were treated. In his reply to this address the Prince of Wales expressed his pleasure at being able to be present at the opening of a hospital whose affairs had his grave and especial sympathy. The evidence which had been given before the Royal Commission on the housing of the working classes had left upon him a deep impress of the miserable surroundings of the homes of many of his countrymen. It might be many years before really adequate measures could be adopted to lessen this evil, and in the meantime it was most encouraging to see hospital accommodation increasing, although it was still far below the wants of the poor. "It will," said his Royal Highness, "indeed be a happy day when every poor person in London who cannot afford attendance at home has the best prospect offered him of a quick recovery from illness in a thoroughly well administered hospital." Special mention was made by the Prince of Wales of the donations of Sir Donald Smith and Baron Hirsch, who have given to the institution the sums of £1500 and £700 respectively. The Princess of Wales formally declared the building open, and after an inspection of the wards the Royal party left.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. William Birkes of Welham Hall, Retford, has presented £1000 to the Beckett Hospital, Barnsley, in remembrance of Mr. Beckett.—Mr. W. W. Astor of Cliveden has contributed £100 to the funds of the Maidenhead Cottage Hospital.—The Mercers' Livery Company has given a donation of £26 5*s.* to the North-Eastern Hospital for Children, Hackney-road.—The Queen has sent a donation of £100 to the Hospital for Sick Children, Great Ormond-street, Bloomsbury.—The late Mr. Seymour R. Delmé of Caius Hall, Fareham, has bequeathed £200 each to the Hospital for Consumption and Diseases of the Chest, Brompton, and the Cancer Hospital, Brompton, and £100 each to the British Home for Incurables, Clapham-rise, the Royal Hospital for Incurables, Putney, the Hospital for Women, Soho-square, London, and the City of London Truss Society.—The Clothworkers' Livery Company has made the following grants—namely, £50 to the Chelsea Hospital for Women, £40 to the Great Northern Central Hospital, and £60 to the Royal Hospital for Diseases of the Chest, City-road, London.—The executors of the late Mr. A. S. Wilkes have transferred to the Birmingham General Hospital a moiety of securities and cash amounting to upwards of £92,000, being the net amount of the bequest after payment of legacy duty and other deductions.—The late Mr. Daniel Davenport of Aston has bequeathed £100 each to the General Hospital, Birmingham, and the General Dispensary, Birmingham.—The executor of the estate of the late Mr. Samuel F. Harrison of Wakefield has sent a stock certificate for £10,000 in consols on account of the bequest to the Clayton Hospital at Wakefield by the testator, Mr. Harrison.—Lord Rosebery has sent a donation of £25 to the Surrey Convalescent Home at Seaford.—Mr. R. Heywood Thompson of Nunwick Hall, Penrith, has given £500 to endow a bed in the Liverpool Convalescent Institution at Woolton, in memory of his father, the late Mr. S. H. Thompson of Thingwall Hall.—The late Mr. Charles Peace of Sheffield and Worksop has bequeathed £250 each to the Sheffield General Infirmary and the Sheffield Public Hospital, and £100 each to the Sheffield Children's Hospital and Jessop's Hospital for Women.—The Royal National Hospital for Consumption at Ventnor has received an anonymous donation of £250.—"A lady of a well-known Liverpool family" has given £500 in trust for the endowment of a cot in the Convalescent Home for Children at West Kirby.—The Baroness Burdett-Coutts has given £2000 to the building extension fund of the Great Northern Central Hospital.—The City of London Corporation has made the following grants—namely, 50 guineas to the South Lambeth, Stockwell, and North Brixton Dispensary and 100 guineas each to the Royal Hospital for Women and Children, Waterloo-bridge-road, and the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor.—The late Major F. G. Mackenzie has bequeathed £100 each to Guy's Hospital and the Hospital for Consumption and Diseases of the Chest, Fulham-road.—"A Friend" has given £1300 for the endowment of a bed

in the Swansea General Hospital.—The late Mr. Henry Spicer of Sherborne-lane, London, after payment of certain legacies, has bequeathed the bulk of his property in equal shares for the benefit of the Samaritan societies of the following hospitals: Guy's, St. Thomas's, the Royal Free, the Middlesex, the London, and the Metropolitan at Dalston.—The late Mrs. Foreman, of Thornhill Park, Sunderland, has bequeathed £1000 to the Sunderland Infirmary and £400 to the Sunderland Eye Infirmary.—The trustees of Smith's Charity (Kensington estate) have sent a further donation of £50 to the Chelsea Hospital for Women.—The late Mrs. Livius, of Berkeley-square, Bristol, has bequeathed £50 each to the Bristol Royal Infirmary and the General Hospital, Bristol.—The Grocers' Livery Company has given a donation of £50 to the North-Eastern Hospital for Children.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Sea Fisheries (Shell-Fish) Bill.

THIS measure, introduced into the House of Commons by the Government, represents an attempt to preserve shell-fish of all kinds from indiscriminate destruction. It empowers the Sea Fisheries Committees established in various parts of the country to make by-laws, to be observed within their respective districts, for the fixing of the sizes and condition at which shell-fish may not be removed from a fishery, for the protection of shell-fish laid down for breeding purposes, and for the protection of cultch and other material used for the cultivation of shell-fish. In recent years great damage has been done to fisheries by the wholesale removal of cultch. In another part of the Bill the committees are given power, subject to the sanction of the Board of Trade, to stock or restock public oyster or mussel beds. The scope of the measure is made sufficiently wide, for in a subsection it is said that, "for the purposes of this Act, the expression 'shell-fish' shall include all kinds of molluscs and crustaceans."

Food Adulteration.

In view of the appointment of the Select Committee to inquire into the whole question of food adulteration, Sir Charles Cameron has withdrawn his Bill for the amendment of the Sale of Food and Drugs Act of 1875.

The Relief of Able-bodied Unemployed.

A long report has been presented to Parliament with regard to the measures taken by the local authorities of the principal centres of population in Scotland for the relief of the able-bodied unemployed during the past winter. According to the present law it is not permitted to parochial boards to give relief to the able-bodied, nor, indeed, is there any public body in Scotland responsible for relief of this class. All that is done is done voluntarily and, according to this report, has been done during the past winter in a very satisfactory manner. The General Superintendent of the Board of Supervision, however, expresses the opinion that the distress and destitution will probably recur at no distant date in some of the towns, and "while the present system of voluntary action on the part of municipal bodies and private societies cannot be said to have failed, it has been suggested to me by several of the persons with whom I have conversed that an alteration of the law is desirable. They propose that the parochial board should be empowered in special instances to grant relief from the poor-rate to the able-bodied upon a representation to the Board of Supervision, and that with the consent of the Board or the Secretary for Scotland relief to the able-bodied should become illegal within a certain area for a specified time."

HOUSE OF COMMONS.

THURSDAY, JUNE 7TH.

The Water Question in Egypt.

In reply to a question standing in the name of Mr. Graham, Sir Edward Grey said that the subject of the Nile reservoir had occupied the attention of the Egyptian Government for four years. After considering the various schemes submitted to them they appointed an international commission of experts to advise them as to the one most suitable for adoption. In such circumstances Her Majesty's Government saw no reason to interfere in the matter.

Small-pox Epidemic at Leith.

Sir Charles Cameron addressed a long question on the above subject to Sir George Trevelyan, who informed the hon. member that he had made inquiry as to the outbreak of small pox at Leith, and he understood that strong criticisms had been passed by competent authorities as to the action of the local authority of the burgh. The Board of Supervision had for some time brought all the pressure they could to bear upon the local authority, and they had had a conference at which the defects of the burgh sanitation were pointed out, and they took the step of issuing a special order requiring the local authority forthwith to deal with insanitary houses. Some improvement followed these measures, but the board had continued to press the local authority to follow the example of the great majority of the authorities both of England and Scotland, of adopting the Notification of Diseases Act; and he believed that that Act was adopted the day before last. He was informed that in nearly all the cases reported to the local authority the patients had been removed to the hospital. He had just received a telegram saying that joint action would be taken along with Edinburgh in combating the epidemic.

MONDAY, JUNE 11TH.

Swine Fever.

Replying to Mr. Chaplin, Mr. Gardner said that during the thirty-one weeks which have elapsed since Nov. 1st last 2782 outbreaks of swine fever had been reported and 4562 swine had died of the disease. The actual number of outbreaks reported to the local authorities during the period from Nov. 5th, 1892, to June 3rd, 1893, was 1710, and the number of swine dying from the disease 3772. The right hon. gentleman added that he had invited representatives of certain local authorities to a conference on the subject, which he had arranged to hold during the present month.

TUESDAY, JUNE 12TH.

The Alleged Cruelty by a Nurse at Brentwood.

Mr. Shaw-Lefevre informed Major Rasch that the superintendent of the Hackney Union training schools had been suspended from the performance of his duties, and that it was the intention of the Local Government Board to direct an inquiry by one of the inspectors as to the management of the schools.

Boards of Guardians and the Vaccination Act.

Sir W. Foster, in answer to a question by Mr. Keir Hardie, said he was unable to state in what number of cases boards of guardians were refraining from directing proceedings for the enforcement of the Vaccination Act. It was the duty of the guardians to give the necessary directions for this purpose, and the Local Government Board had no intention of advising boards of guardians to refrain from putting the Act into force pending the decision of the Royal Commission.

The Importation of Canadian Cattle.

In reply to Mr. Chaplin and Colonel Waring, Mr. Gardner said: With a view if possible to clear up the doubts which had been expressed as to the precise character of the disease with which the infected animals landed from Canada during the past two years had been affected, he was proposing to hold a special inquiry with a view to hearing the views of the various experts who by his invitation inspected the diseased portion of the lungs of the Toronto animal, and he was happy to say that he had been able to secure the assistance in this matter of Sir H. James and of Dr Burdon Sanderson, the Waynflete Professor of Physiology at Oxford University, who had most kindly undertaken to act as his legal and pathological assessors respectively. Pending the conclusions at which he might arrive as the result of the inquiry the existing regulations of slaughter at the port must of course be maintained; but it would be contrary to law for him to enter into any engagement either one way or the other as to his future action, which must depend on the facts and information before him from time to time.

THURSDAY, JUNE 14TH

Glanders in London.

In reply to a question by Mr. Fellowes, Mr. Herbert Gardner stated that the figures before him did not support the view that glanders was very prevalent in London at the present time. During the twenty-three weeks ending the 9th inst. they received reports of only 346 outbreaks and 451 animals attacked in the county of London, as compared with 490 outbreaks and 820 animals in the corresponding period of 1893, and 553 outbreaks and 1029 animals in the corresponding period of 1892. In view of these figures he did not think that the closing of drinking troughs and the consequent withdrawal of the facilities they afforded for watering horses would be justified at the present time. He would, however, keep the matter in view.

The Plague at Hong Kong.

Mr. Sydney Buxton, answering a question by Sir George Baden Powell, said that the last telegram on this subject received by the Government was on June 12th, and it stated that the number of deaths had been 1500. There had not yet been time to receive particulars by post. They had telegraphed for further particulars, and when they were received they would be communicated to the House.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BOWLAN, MARCUS MARWOOD, M.B., B.S. Durh., D.P.H. Camb., Med. Psych. Cert., has been appointed Medical Superintendent to St. George's-in-the-East Infirmary.

BRYANT, J. H., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Durham County Hospital, vice Plummer resigned.

CAMPBELL-BROWN, Dr., has been appointed Public Analyst, St. Helens, Lancashire.

CAMERON, JOHN, L.R.C.S. Edin., has been reappointed Parochial Medical Officer, Kintore.

CASS, E. E., M.B., B.S. Durh., has been appointed Medical Officer for the Muncaster Sanitary District of the Bootle Union.

EVERETT, E. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Norwich School Board.

FRIER, CHARLES, M.B., C.M. Edin., has been appointed Resident Medical and Surgical Officer to the Jaffray Suburban Branch of the General Hospital, Birmingham.

GLASSINGTON, CHAS. W., M.R.C.S., L.D.S. Edin., has been appointed Dental Surgeon to Westminster Hospital, vice E. Lloyd Williams, resigned.

GOODWORTH, R. P., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Medical Officer of Health for the Winterton Urban Sanitary District of the Glandford Brigg Union, vice Dawson.

HAMILTON, W. M., M.D., M.Ch. Irel., D.P.H. R.C.P.S. Irel., has been appointed Medical Officer for the Barton Sanitary District of the Barton-upon-Irwell Union, vice Tattersall, resigned.

HARRISON, RICHARD CHARLTON, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., has been appointed Honorary Medical Officer to the Ealing Cottage Hospital.

HEMBROUGH, J. W., M.D. Durh., L.S.Sc., M.R.C.S., has been appointed Medical Officer of Health to the County Council of Northumberland.

JONES, HERBERT, L.R.C.S., L.M. Irel., D.P.H. Camb., has been reappointed Medical Officer of Health for Crewe.

MILLS, R. J., M.B., C.M. Aberd., M.R.C.S. Eng., has been appointed Medical Officer to the Norwich School Board.

MILLER, JOHN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Iver Sanitary District of the Eton Union.

NODES, J. D. S., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the No. 2 A Sanitary District of the East Preston Union.

NORTON, JOHN, M.D. Durh., M.R.C.S., D.P.H., has been appointed Medical Officer of Health to the Vestry of St. Margaret's and St. John's, Westminster.

POWELL, A. F. M., M.B., C.M. Edin., has been appointed Medical Officer and Public Vaccinator for the No. 1 District of the Parish of Sedgley of the Dudley Union, vice Ballenden resigned.

PRATT, W. SUTTON, M.D., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Factory Surgeon for Rugby and district, vice F. W. D. McGachen, resigned.

ROBERTSON, W. J., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician at Charing Cross Hospital.

SLOMAN, S. G., jun., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Farnham Urban Sanitary District of the Farnham Union.

SMITH, J. S. K., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Stanley Hospital, Liverpool.

STEELE, JOHN, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health to the Kidsgrove Local Board.

SUFFIELD, THOS. J. S., L.R.C.P.I., L.S.A. (Sheba Gold Mining Company, South African Republic), has been appointed Medical Officer to the Netherlands South African Railway Company, Barberton District.

SYMONS, T. H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon at Charing Cross Hospital.

TAYLOR, ALFRED SEYMOUR, L.R.C.P., L.R.C.S. Edin., L.F.P. & S. Glasg., L.M., has been appointed Medical Officer of Health to the Northern District of the Tynemouth Union Rural Sanitary Authority, vice J. W. Hembrough, resigned.

THOMPSON, CHAS. S., M.B., C.M. Edin., has been appointed Medical Officer for the Abbotsham Sanitary District of the Bideford Union.

THOMSON, WILLIAM, M.B., C.M. Aberd., has been appointed Chief Medical Officer to the British Hospital at Montevideo, South America.

WEBB, W. H., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Kingsbridge Rural Sanitary Authority.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOOTLE BOROUGH HOSPITAL, Derby-road, Bootle.—House Surgeon. Salary £80 per annum, with board, lodging, washing, &c.

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon, unmarried. Salary £40 per annum, with board and apartments.

COUNTY ASYLUM, Whittingham, Preston.—Junior Assistant Medical Officer. Salary commencing at £100 a year, with apartments, board, and washing.

DARENTH SCHOOL FOR IMBECILES, near Dartford, Kent.—First Assistant Medical Officer. Salary £160 per annum, rising £20 annually to £200, with board, furnished apartments, attendance, and washing. Applications to the Clerk of the Board, Chief Offices, Norfolk House, Norfolk-street, Strand, W.C.

DISTRICT INFIRMARY, Ashton-under-Lyne.—House Surgeon. Salary £90 a year, with board and lodging.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, unmarried. Salary £70. To reside and board in the hospital.

NEWPORT AND MONMOUTHSHIRE INFIRMARY, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants provided).

ROYAL ALBERT EDWARD INFIRMARY, Wigan.—Junior House Surgeon. Salary £80, with apartments and rations, exclusive of wines, spirits, and washing.

ROYAL HOSPITAL FOR SICK CHILDREN DISPENSARY, 91, West Regent-street, Glasgow.—Extra Honorary Surgeon.

ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, S.E.—Surgeon-in-Ordinary, to visit patients at their own homes in the Blackfriars District. Honorarium £20 per annum.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant, for six months. Board and residence provided.

SUNDERLAND BOROUGH LUNATIC ASYLUM.—Medical Superintendent. Salary £350 a year, with furnished house, board for self and wife (if married), washing, coals, light, two servants, and use of garden. Applications to the Clerk to the Visiting Committee, Town Hall, Sunderland.

THE GENERAL INFIRMARY, at Gloucester, and the GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeon for six months. Board, residence, and washing provided.

UNIVERSITY COLLEGE, DUNDEE, ST. ANDREW'S UNIVERSITY.—Professor for Chair of Chemistry.

WEST RIDING ASYLUM, Wakefield.—Two Resident Clinical Assistants, for six months. Board, furnished apartments, and attendance provided.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

BOWKER.—On June 8th, at Cwmbran House, Newport, Mon., the wife of C. Stanser Bowker, L.R.C.P. &c., of a daughter.

DENMAN.—On June 5th, at Ellei House, Bournemouth, the residence of her mother, the wife of Robert Denman, surgeon, of a son.

FRASER.—On June 8th, at the Limes, Leigh, Tunbridge, the wife of Frank Fraser, M.D., of a son.

KENT.—On June 13th, at 3, Minard-terrace, Partick Hill, Glasgow, the wife of R. T. Kent, M.A. Oxon, F.R.C.S., of a daughter.

SNOW.—On June 9th, at 6, Gloucester-place, Portman-square, the wife of Herbert Snow, M.D. Lond., of a son.

MARRIAGES.

CAIRD—RORIE.—At Westgreen House, Dundee, on June 5th, Francis Mitchell Caird, F.R.C.S. Edin., 21, Rutland-street, Edinburgh, to Jane Anne, elder daughter of the late G. L. Rorie, secretary of the National Bank of Scotland, Limited.

COLLIER—YOUNG.—On June 12th, at St. Bartholomew's, Dublin, Horace Stansfield Collier, F.R.C.S., to Margaret Constance, daughter of the late Robert Young, Esq., of Clontarf, Dublin.

CUTCLIFFE—HAYWARD.—On June 13th, at St. Clement's, Liverpool, Montagu Cutcliffe, L.R.C.P., M.R.C.S., of North Tawton, Devon, youngest son of George Cutcliffe, J.P., C.C., of Witheridge, North Devon, to Marion, elder daughter of the late William Hayward, of St. David's, Southsea. No cards.

DEVEREUX—PHILLIPS.—On June 14th, at St. Nicholas' Church, Kemerton, by the Ven. Hemming Robeson, Archdeacon of Bristol, assisted by Rev. J. J. Mercier, Rector of Kemerton, and Rev. H. Sheringham, Vicar of Tewkesbury, William Charles Devereux, M.A., M.B. Cantab., of North House, Tewkesbury, son of the late Daniel Devereux, M.D., to Ethel Mary, second daughter of Thomas Phillips, of The Lower Court, Kemerton.

EDGE—WHITTAKER.—On June 9th, at the Parish Church, Walthamstow, Essex, by the Rev. G. Padfield, M.A., Arthur James Edge, M.B. Lond., M.R.C.S., L.R.C.P., of Maidenhead, Berks, elder son of His Honour Judge Edge, to Mabel Adelaide, eldest daughter of Henry Travis Whittaker, of Thornbury, Walthamstow, Esq., and granddaughter of the late Rev. John Whittaker, D.D., Vicar of Blackburn.

GOODMAN—MARRIOTT.—On June 5th, at All Saints', Kensington-park, W., by the Rev. Hugh Stowell, assisted by Canon Trench, Roger Neville Goodman, M.D., M.R.C.S., B.Sc., of Elmside, Kingston-on-Thames, to Louie Harvey, second daughter of the late Hunt Marriott, Esq., of Calcutta, Bengal Presidency.

LLOYD—SMITH.—On April 18th, at Mackay, Queensland, George Tyndale Lloyd, M.B., son of the late Rev. Thomas Lloyd, of St. Ives, Hunts, to Helen, third daughter of the late George Smith, of Mackay.

MACGREGOR—ACKROYD.—On June 6th, at St. Mary Abbott's, Kensington, by the Rev. Dr. Knox, of Birkenhead, Alexander Macgregor, M.D. Aberdeen, to Ethel Marie, elder daughter of George Ackroyd, M.D., The Mansions, South Kensington.—At home Tuesdays in July and August.

MASTERMAN—LELLER.—On May 23rd, at St. Paul's, Jerusalem, Ernest Wm. Gurney Masterman, F.R.C.S. Eng., to Louisa Maria Nazarena, second daughter of the Rev. J. Leller, Senior C.M.S. Missionary, Palestine.

PEARSON—HUGHES.—On June 5th, at Douglas Church, Parbold, Southport, by the Rev. Fred. R. Pearson, Rector of St. Alban's, Manchester, brother of the bridegroom, and the Rev. H. P. Owen-Smith, vicar of the parish, Reginald Spencer Pearson, M.R.C.S. Eng., and L.R.C.P. Lond., younger son of the late Rev. James Pearson, M.A., F.R.A.S., Vicar of Fleetwood, to Minnie Savile, youngest daughter of W. Hughes, of Thornes, Wakefield, Yorks.

SANKEY—MIÉVILLE.—On June 12th, at All Souls' Church, South Hampstead, by the Rev. Richard King, M.A., and the Rev. Canon Floyd, Julius Ivor Sankey, M.R.C.S. and L.R.C.P., of Brenchley, Kent, second son of the late George Sankey, M.R.C.S., L.S.A., of Maidstone, to Violet, youngest daughter of Frederic L. Miéville, of 36, Albion-road, South Hampstead.

SLAUGHTER—GREENWAY.—On June 6th, at St. Cuthbert's Church, Darwen, Ernest A. Slaughter, B.A., M.D., younger son of Commander C. J. Slaughter, R.N., of Hove, Brighton, to Kathleen, the fourth daughter of the Rev. Charles Greenway, of Darwen Bank, Darwen.

DEATHS.

CHASE.—On June 11th, at Reading, Francis Edward Chase, M.D., aged 78 years.

DAVISON.—On June 8th, at Streate-place, Bournemouth, in her ninth year, Dorothy, youngest daughter of James Davison, M.D., M.R.C.P. Lond.

JOLLY.—On June 9th, at Bournemouth, Robert Jolly, M.D., F.R.C.S., of Birmingham, and Grovely, Northfield, Worcestershire.

ROBERTS.—On June 6th, at Tientsin, F. C. Roberts, M.B., C.M., youngest son of Alderman J. F. Roberts, Manchester.

SANKEY.—On June 8th, at Boreatton Park, Baschurch, Salop, Herbert Richard Octavius Sankey, M.B. Lond., M.R.C.S., aged 44.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office, June 14th, 1894.

	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 8	29·97	W.	55	52	100	64	50	..	Cloudy
,, 9	29·86	S.W.	57	56	107	65	50	0·05	Cloudy
,, 10	29·85	S.W.	60	57	85	64	55	..	Cloudy
,, 11	29·73	W.	55	50	112	64	50	0·04	Cloudy
,, 12	29·86	N.	55	52	105	68	48	0·22	Cloudy
,, 13	29·92	N.E.	54	51	81	59	50	0·05	Cloudy
,, 14	30·14	W.	57	54	110	69	51	..	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Great Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Great Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Chelsea (2 P.M.), Soho-sq. (2 P.M.), North West London (2 P.M.)

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.)

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—8 P.M. Mr. Robert H. Scott: Fogs Reported with Strong Winds during the Fifteen Years 1876-1890 in the British Isles.—Mr Richard H. Curtis: Some Characteristic Features of Gales and Strong Winds.

ROYAL MICROSCOPICAL SOCIETY (20 Hanover-square, W.).—8 P.M. On the Unreality of certain Characters generally accepted for Specific Diagnosis in the Diatomaceæ.—Mr. F. Chapman: Foraminifera of the Gault of Folkestone.

LECTURES AND ADDRESSES.

MONDAY.—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. T. Pickering Pick: Diseases of the Ends of the Long Bones in Children.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Great Portland-street, W., 8 P.M., Dr. Whistler: Atrophic Rhinitis, Ozæna.

ST. JOHN'S HOSPITAL FOR SKIN DISEASES (Leicester-sq., W.C.).—6 P.M. Dr. Morgan Dockrell: Tuberculosis of the Skin.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Insanity with Syphilis and Organic Brain Disease.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Syphilodermia.

METROPOLITAN HOSPITAL (Kingsland-rd., N.E.).—5 P.M. Dr. Risien Russell: Cerebral Localisation. (Post-graduate Lecture.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. T. Pickering Pick: Diseases of the Ends of the Long Bones in Children.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. Bernard Pitts: Treatment of certain Acquired Deformities in Children.—National Hospital for Paralysed, Bloomsbury, 2 P.M., Dr. Taylor: Electrical Testing and Treatment.—Central London Sick Asylum, Cleveland-street, W., 5.30 P.M., Mr. Stanley Boyd: Cases in the Wards.

FRIDAY.—LONDON HOSPITAL MEDICAL COLLEGE.—4 P.M. Mr. Jonathan Hutchinson: On Bazin's Malady.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. T. Pickering Pick: Diseases of the Ends of the Long Bones in Children.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Insanity with Cardiac Disease, Phthisis, Gout &c.

During the week marked copies of the following newspapers have been received:—*Bristol Times and Mirror, Eastern Daily Press, Bradford Observer, Western Mercury, Devon Gazette, Croydon Observer, Derbyshire Advertiser, Manchester Guardian, Derby Reporter, Sutton Advertiser, Nottingham Guardian, Sussex Daily News, Norfolk Daily Standard, Irish News, Newcastle Guardian, Keighley News, Bath Herald, Oban Times, Shield's Daily Gazette, Scotsman, Cumberland Advertiser, Indian Mirror, Pioneer Mail, Scottish Leader, Times of India, Oriental Advertiser (Constantinople), News, Wigan Examiner, Kerry Sentinel, Cork Constitution, Morning, Cornwall Gazette, Llangollen Advertiser, Rossendale Echo, City Press, Hastings and St. Leonards Times, St. Helens Newspaper and Advertiser, Western Daily Press, The People, School Board Chronicle, Western Guardian, Hastingden Guardian, Stalybridge Reporter, Auckland Chronicle, Coleraine Constitution, Allan Journal, Bacup Times, Oxford Journal, Ramsay Courier, Oswestry Advertiser, &c., &c.*

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

MEDICAL ADVERTISING.—HULME DISPENSARY, DALE STREET, STRETFORD-ROAD MANCHESTER.

Country Doctor forwards us a cutting from the advertising columns of the *Manchester Courier*, giving the names of the whole staff of the above dispensary, ladies and gentlemen, consulting physicians and surgeons, and the working honorary officers, with numbers of patients, &c., &c. He considers it to be medical advertising. We think it liable to that criticism, though probably not so intended. Clearly none of the gentlemen whose names appear in this advertisement would allow their names to appear so in connexion with their own private dispensary or surgery, or practice. We think it hard on general practitioners that such advertisements should be sanctioned. They are tempted to break through the traditions of the profession when they see the names of distinguished physicians and Fellows of their Colleges so advertised.

Whitstable.—Neither place seems to us exactly suitable for a patient recovering from pneumonia.

THE USE OF CHLORINE IN DRESSING ULCERS.

To the Editors of THE LANCET.

SIRS,—Mr. Fletcher at page 478, THE LANCET, December, 1854, thus writes: "At the suggestion of the professor of surgery at the Queen's College, Birmingham, I beg to call the attention of the readers of THE LANCET to a simple, and at the same time highly efficacious, mode of treating sloughing wounds by means of chlorine." Had Dr. Diver, whose treatment of chronic ulcers of the leg is described at page 1374, THE LANCET of last week, referred to Section (160:3), or to chlorine, Section (246:5) of the *Medical Digest* he would have seen that the treatment has been in vogue for more than forty years.

May I suggest that when papers are referred to, the page may be given—for example, to say THE LANCET, May, 1894, or in last week's LANCET, if no index has yet been published, involves a great waste of time in the search.—I am, Sirs, your obedient servant,

Boundary-rd., N.W., June 6th, 1894. RICHARD NEALE, M.D. Lond.

THE USE OF THE TITLE "SURGEON" BY APOTHECARIES.

Alpha.—The answer is obvious. If the Licentiate has received his licence under the conditions of the Act of 1886—i.e., if he has undergone an examination in surgery—he is clearly not only an apothecary, but a surgeon licensed to practise in medicine, surgery, and midwifery, and as much entitled to put "Surgeon" on his door as to put "Apothecary."

A Reader's letter shall have attention.

REMUNERATION OF ASSISTANTS.

Iatros.—Our correspondent will do well to act on his liberal impulses. The work of locum tenens is very different from that of mere assistant and should be well remunerated. We should approve also of no breach of continuity in the pay of an assistant while enjoying a well-earned holiday.

M.R.C.S Eng., L.R.C.P. Lond.—We think there is no likelihood that our correspondent's suggestions will be realised.

UNQUALIFIED ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—Will you kindly enlighten me upon the following points: 1. I keep an unqualified assistant. He is an out-door assistant living in private apartments about 200 yards away from my house. He dispenses my medicine. He attends no midwifery, except perhaps for an hour or so till I can get there. He helps me in the visiting to this extent. I go to every fresh case first. If it is a serious illness I attend the case until the patient is out of danger, and then perhaps for a few visits I allow my assistant to attend, still keeping the patient under my own supervision. Practically speaking, therefore, he only attends cases that are convalescent, or cases that I could see on my first visit were not serious—e.g., common colds, sprained ankles, varicose legs, confinements after the first few days, &c. If by any chance during my absence on my daily round my assistant is called to a fresh case, I always make a point of seeing that case myself, also the same day, no matter how trivial he may say the case to be; or if he is sent to see an old chronic case, and there happens to be a fresh case of illness in the house, he reports the case to me and I see it the same day. Does that in any way come under the case of "covering," or am I doing anything wrong in employing him? During dispensary hours he makes up medicines and I do the consulting. If I am out he attends to the patients that come to the dispensary for medicine, but if anything serious turn up he has instructions to make the patient wait till my return or call again. Is that in any way wrong? 2. When I see a patient who is suffering from diphtheria, and I notify the case to the sanitary authorities, suppose scarlet fever supervenes in the same case afterwards—say in a few days, or a week or so—should I notify the case again as scarlet fever? 3. If I have notified a case, as say diphtheria, and had it removed to the hospital, and it subsequently turns out to be scarlet fever, with afterwards diphtheria as a complication, am I liable to a prosecution for not noticing and notifying the preliminary scarlet fever? 4. In my practice I have very many old "chronics" whom I attend—i.e., suffering from chronic disease—e.g., heart disease, asthma, or simply old age. I visit them perhaps once a month or so to see how they are getting on. I have done so for years in some cases, well knowing their disease and its incurability. If they die within three weeks or a month of my actually seeing them, although they are always on my list, am I justified in giving a certificate of death? Some of them are eighty to ninety years of age, and have nothing the matter save old age. I look in and see them occasionally when I happen to be passing that way—never longer than one month. If you would advise me upon these points I would be much obliged.

I am, Sirs, yours truly,

June 4th, 1894. ANXIOUS TO DO RIGHT.

*** 1. Our correspondent will not be doing wrong or rendering himself liable to the charge of covering if he occasionally makes use of the services of an unqualified assistant, he himself having personal charge of the patients and being entirely responsible for their treatment.—2. If he has notified diphtheria to the sanitary authorities, and some days later the patient develops scarlet fever, we are of opinion that a second notification should be sent.—3. If diphtheria has been notified, and the case after admission to hospital turns out to be one of scarlet fever, the notifier would not be liable to a prosecution, unless it could be shown that he had failed to diagnose the case through gross ignorance or culpable negligence. A medical man cannot be expected to guarantee a correct diagnosis in every case. The fact that fever hospitals have isolation blocks or wards for doubtful cases shows that even with the greatest care it may be impossible at first to give a decided opinion.—4. As regards the chronic cases, the best plan to pursue in case of a death arising, say, three to four weeks after the last visit, is to communicate with the coroner and intimate readiness to give a certificate.—ED. L.

THE GRIFFITHS FUND.

To the Editors of THE LANCET.

SIRS,—The following are further subscriptions to the above fund:—

Already acknowledged .	£165	18	0	John J. Merriman	£1	1	0
Thomas Jones	2	2	0	J. Raglan Thomas	1	1	0
J. Jenkin Lloyd.. ..	1	1	0	J. Morgan Evans	1	0	0

Our committee have decided to close the fund on the 20th inst. We shall therefore be glad if intending subscribers will forward their subscriptions without delay.

We are, Sirs, yours faithfully,

E. LE CRONIER LANCASTER, W. F. BROOK, } Hon. Secs.

Swansea, June 12th, 1894.

CONSIDERATE CHARGES.

MEDICINE is indispensable alike for the poor and the rich, and medical men constantly adapt themselves to the circumstances of their humblest patients if they believe them to be honest. Apparent exceptions should be carefully studied before a judgment adverse to the practitioner is formed. A case is recorded in the *South Wales Daily News* in which a practitioner sued an old man, a farm labourer, Wm. Henry Davies, for the balance of an account of £25 for attendance on his wife suffering from erysipelas. The balance unpaid was £10. The rate of charge was a guinea a visit, or 2*s.* 6*d.* a mile. This sounds unaccommodating and unkind, even when we take into account that the disease was erysipelas and the distance nine miles. The particular facts seemed hard. The poor man had sold a cow to pay the £15. The judge considered that the medical man had overcharged. Of course, the fee, abstractly considered, was not too much for such a case at such a distance. The judge said he knew of no regular charge, medical men usually charging their patients according to their position. We shall still reserve full judgment in the case. We may not have got all the facts.

THE WHOLESALE MANUFACTURE OF MEDICAL MEN AND ITS OBJECTS.

To the Editors of THE LANCET.

SIRS,—I shall have great pleasure in sending the usual honorarium to any lecturer or examiner connected with our medical schools or to any member of the General Medical Council who can tell me of an opening for a medical man to start practice, or who furnishes me with the name of any district, town or country, in the United Kingdom where there are not too many doctors already. I, in common with most general practitioners, do not know of any such delightful locality, and yet our number continues to increase at an alarming rate. Now from this college and now from that shoals of newly fledged practitioners are scattered through the country to enter into competition with us. We are well aware what the result has been—clubs and sixpenny dispensaries and an entire lowering of the status of the medical profession. Of course this injury to the profession is not the object of the wholesale manufacture now going on; but what in the name of common sense is the object? Is it for the benefit of the newly qualified man, who can never get an adequate return for the time and money spent in acquiring his knowledge, or for the good of the public, who have more doctors than they want? or is it for our benefit, who even at present find it difficult to make both ends meet and keep up appearances? If anybody answers this question it will be some satisfaction to THE GENERAL PRACTITIONER.

FAIR PLAY FOR HOSPITAL SUNDAY.

IT will be admitted on all hands that Hospital Sunday is in a special sense the creation of the Hospital Sunday Fund. It is set apart by its resolutions and it is advertised for weeks beforehand at its expense; collections made on this day are practically made by it and for it. It will scarcely be believed that the secretary of the Hospital for Incurables wrote to the ministers and officers of London churches to devote a portion of their collection to this hospital. This is not fair play to Hospital Sunday, and is not calculated to benefit the Hospital for Incurables. It does not share in the Hospital Sunday Fund because it is not a hospital in the ordinary sense of the word. Its friends have never been able by fair argument at the annual meeting to alter the rule by which the Hospital Sunday Fund is restricted to hospitals in the strict sense of the word, and it is a poor revenge to take to issue the circular we refer to.

THE SODEN FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly acknowledge the following three subscriptions to the above fund? W. Sutton, 10*s.* 6*d.*; Claude Wilson, 10*s.*; T. M. King, 1*l.* 1*s.* My committee has decided to close the fund within the next fortnight. The sum at present subscribed amounts to £120, or about half Mr. Soden's expenses, and of this postal and printing expenses have absorbed a large fraction.

I am, Sirs, yours faithfully,

W. F. BROOK, Hon. Sec.

Northampton-terrace, Swansea, June 5th, 1894.

MIDWIVES AND CERTIFICATES OF STILL-BIRTH.

MARY CARR, of Seaford-street, Shelton, described as a midwife, has been fined £5 and £1 costs for a false certificate of still-birth in a child. The registrar, after receiving the certificate, found that the child had lived and had been baptised by the Rev. E. Spink, who spoke to the good character of the midwife. The midwife admitted that she had never even seen the case. The Mayor of Hanley informed the court that there had been in the cemetery in the past year 166 cases of interments of still born children, and that there was considerable difficulty in ascertaining whether a child had been born so or not. Such a statement emphasises the necessity of requiring midwives in all such cases to apply to a medical man.

Communications, Letters &c. have been received from—

A.—Dr. T. Archer, West Worthing; Mr. J. F. Arlidge, Stoke-upon-Trent; Mr. R. Ackrill, Harrogate; Messrs. Atkinson and Philipson, Newcastle-on-Tyne; Messrs. Armour & Co., London; A Reader, London; A New Arrival.

B.—Dr. W. C. Brown, Penang; Dr. A. J. M. Bentley, London; Mr. W. H. Bennett, London; Mr. T. B. Browne, London; Mr. A. J. Bentley, Whitehouse, Aberdeenshire; Mr. J. C. H. Beaumont, London; Messrs. C. Barker and Sons, London; Messrs. Burgoyne, Burbidges and Co., London; Messrs. Brown, Gould and Co., London; Bootle Borough Hospital, Clerk of; Bury Dispensary Hospital, Secretary of.

C.—Dr. James Calvert, London; Dr. E. J. W. Carruthers, Manchester; Mr. H. S. Collier, Dublin; Mr. G. H. Cowen, London; Mons. A. Cordes, Paris; Mr. Crook, Wednesbury; Mr. R. A. Clark, Liverpool; Lady Clark, Hatfield; Crystal Palace Co., Secretary of; Cortland Wagon Co., Manager of, London; Columbia Chemical Co., Washington, Manager of.

D.—Mr. H. A. D. Dickson, London; Mr. C. M. Davidson, Lincoln; Mr. William Dalton, Blackpool; Messrs. Douglas and Mason, Edinburgh; Dorset County Hospital, Dorchester, Clerk of.

E.—Messrs. Eason and Son, Dublin; Eighth International Congress of Hygiene and Demography, Hon. Secretary of.

F.—Dr. R. W. Felkin, Edinburgh; French Flint Glass Bottle Co., London.

G.—Dr. S. Grose, Melksham; Messrs. Giddy & Giddy, London; Gresham Life Assurance Society, Directors of; Glasgow Eastern Medical Society, Secretary of; Gloucester General Infirmary, Secretary of; General Practitioner.

H.—Brig.-Surg.-Lt.-Col. J. Hector, London; Mr. F. S. D. Hogg, London; Mr. T. Garrett Horder, Cardiff; Mr. J. Heywood, Manchester; Mr. J. P. Humphrey, London.

I.—Iatros; Iconoclast.

J.—Mr. T. Jackson, Holbeach; Mr. W. E. James, Monmouth; J. J. B.

K.—Mr. T. C. Kirton, Leigh; Messrs. Krohne and Sesemann, London; Messrs. Keith and Co., London.

L.—Mr. H. Littlewood, Leeds; Mr. S. Lee, London; Mr. Arthur N. Lee, Moseley; Messrs. Longmans, Green and Co., London; Messrs. Lee and Martin, Birmingham.

M.—Dr. J. Mackenzie, Burnley; Dr. W. A. Moynam, Penarth; Mr. R. Martin, Gilford, co. Down; Mr. A. Manclark, London; Mr. J. Milne, London; Mr. E. S. Medcalf, Hove; Mr. J. H. B. Masterman, Cambridge; Mr. W. A. Manning, Wylde Green; Messrs. Mullock and Sons, Newport, Mon.; Messrs. J. Maythorn and Son, Biggleswade; Messrs. D. Melia and Co., Manchester; Messrs. J. Maclehose and Son, Glasgow; Messrs Souter Mackenzie and Co., Dover; Maltine Manufacturing Co., London; M.O.H.

N.—Mr. C. F. Nassau, Birmingham; Native Races and the Liquor Traffic United Committee, Secretary of.

O.—Dr. D. H. Ormsby, Dublin; Odontological Society, Hon. Librarian of; Observer, Cumberland, R.I.; Oculist, London.

P.—Dr. Charles Porter, Stockport; Prof. Penberthy, Birmingham; Sir J. W. Pease, London; Mr. Y. J. Pentland, Edinburgh; *Pall Mall Budget*, Editor of.

Q.—Quekett Microscopical Club, Secretary of.

R.—Dr. C. H. Ralfe, London; Dr. W. F. Robertson, Edinburgh; Mr. J. W. Roberts, Thirsk; Mr. T. R. Roberts, Carnarvon; Messrs. Robertson and Scott, Edinburgh; Royal Albert Edward Infirmary, Wigan, Secretary of; Royal College of Physicians of London, Bedell of; Royal Aquarium, Secretary of; Rosewood, Pangbourne; Reform, Colchester.

S.—Dr. Gordon Sharp, Leeds; Mr. Paul Swain, Plymouth; Mr. J. E. Stewart, Derby; Mr. T. Smith, London; Mr. W. D. Smallpiece, London; Mr. M. Sheild, London; Mr. H. Sell, London; Mr. James Sanger, London; Messrs. J. Smith and Co., London; Messrs. G. Street and Co., London; Messrs. Southam & Co., London; Messrs. L. Smith and Co., London; St. Thomas's Hospital, Treasurer of; Society of Arts, London, Secretary of; Savoy Legal and General Typewriting Office, London; S. M., London.

T.—Prof. Lawson Tait, Birmingham; Mr. J. L. Thomas, Cardiff.

V.—Mr. C. C. Vevers, Leeds; Mr. C. W. Vickers, Paignton; Mr. J. W. Vickers, London; Messrs. Vigor and Co., London.

W.—Dr. C. Theodore Williams, London; Dr. J. W. White, Glasgow; Mr. W. Spencer Watson, London; Mr. R. T. Williamson, Manchester; Messrs. Whitbread and Co., London; Messrs. W. Wesley and Son, London; West Riding Asylum, Wakefield, Clerk of.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Dr. A. E. Ash, Stoke-on-Trent; Dr. C. Addison, Sheffield; Mr. R. B. Anderson, Bodmin; Mr. S. Aldred, Yarmouth; Agricola, London; A. F., Dublin; Amos, London; Alpha, London; A., London.

B.—Dr. E. G. Bull, Edinburgh; Dr. T. McLachlan Brown, Birmingham; Mr. W. J. Beale, London; Mr. W. Bowes, Hythe; Mr. Birkett, Keswick; Mr. R. H. Brockelbank, London; Bel'ast Hospital for Sick Children, Secretary of; Beta, Manchester.

C.—Mr. S. Corner, Nottingham; Mrs. A. Campron, Louth; Cam, London; Chirurgicus, London; Cambria, London; Cosmo, London.

D.—Mr. C. Dolman, Warsop; Mr. A. J. B Duprey, Tobago, W.I.; Mr. A. Driver, Chelmsford.

E.—Mr. A. J. Edge, London; East, London.

F.—Dr. W. Fligg, Bishop's Lydeard; Mr. D. B. Foley, Wombwell; Full Curriculum, London; Forceps, London; 444, Fulham-road.

G.—Dr. J. Gowans, Aberdeen; G. P., Nottingham.

H.—Mr. A. Hooper, Ely; Mr. W. H. Herbert, London; Messrs. Hind and Haynes, Stockton-on-Tees; Messrs. Haasenstein and Vogler, Geneva.

I.—Ipswich Hospital, Secretary of; Iota, London.

J.—Dr. F. F. Jay, Tenterden; Jeyes' Sanitary Compounds Co., London; J. B. C, London.

K.—Mr. H. L. Keating, Kells; Mr. R. T. Kent, Glasgow; Kensington, London.

L.—Lanius, London; Locum, High Wycombe; Lambda, London.

M.—Dr. C. F. Moore, Dublin; Dr. J. Mason, Sheffield; Mr. F. H. Martin, Crawley; Mr. F. Mellor, London; Miss MacBride, Glasgow; M.D., London; Medicus, Penpont-by-Thornhill; Medicus, Stockport; Mac, London; M., London; Medicus, Liverpool.

N.—Nelson, Croydon.

P.—Dr. S. L. Popham, London; Dr. A. S. Pike, St. John's, N.F.; Dr. F. C. Palmer, Woking; Mr. R. S. Pearson, Southport; Phillips, London; Piccadilly Association of Trained Nurses, Lady Superintendent of.

R.—Mr. N. Rainier, Southampton; Mr. H. Rothera, Liversedge; Mr. R. J. Riley, Cannock; Royal College of Physicians of Ireland, Dublin.

S.—Mr. J. Sinclair, Castleford; Messrs. A. F. Sharp and Co., Glasgow; S. A., London; S. P., London; Sans, London; Sulfonal, London.

T.—Mr. S. Talbot, Oldham; Mr. J. Thin, Edinburgh; Messrs. Tidman and Son, London; Tower House Retreat, Westgate-on-Sea, Secretary of.

V.—Verax, London.

W.—Mr. J. W. E. Williams, Stoke-on-Trent; Mr. W. Wood, Tow Law; Mr. W. West, Folkestone; Mr. J. Ward, London.

X.—Xotic, London.

Y.—York, London.

Z.—Z., London.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year ..... £1 12 6 | Six Months £0 16 3

TO THE CONTINENT, COLONIES, UNITED STATES, INDIA, CHINA, AND ALL PLACES ABROAD ..... One Year 1 14 8

*** In consequence of the new postal arrangements, the Annual Subscription for India, China, and all foreign countries will now be reduced to £1 14s. 8d., instead of £1 16s. 10d. as formerly.

Post Office Orders and Cheques should be addressed to The Publisher, THE LANCET Office, 423, Strand, London, and crossed "London and Westminster Bank, St. James's-square."

ADVERTISING.

Books and Publications (seven lines and under)	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements	0 4 6
Every additional Line	0 0 6
Front Page	per Line 0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An Entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials &c. sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières-Paris.